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ABSTRACT

This publication is a systematic listing of energy education materials and reference sources suitable for use in elementary and secondary schools. Items in this volume, located through computer searches, were still available in May, 1978. This inventory of energy resource materials consists of three indexes: media, grade level, and subject. Each major part is divided into sections and citations are alphabetically listed in each section. Media is divided into: (1) Audiovisual; (2) Books; (3) Instructional Materials; (4) Activities; and (5) Reference Sources. Grade level is sectioned into: (1) Kindergarten; (2) Primary; (3) Elementary; (4) Intermediate; (5) Secondary; and (6) Special Education. Subject is divided into the following sections: (1) Alternative Energy Sources; (2) Biology, Chemistry, Physics, and General Science; (3) Energy Conservation, Consumption, and Utilization; (4) Environmental-Social Aspects of Energy Technology; (5) Fossil Fuels; (6) Materials; and (7) Policy and Legislation. Approximately 800 items are included in this resource list. (MR)

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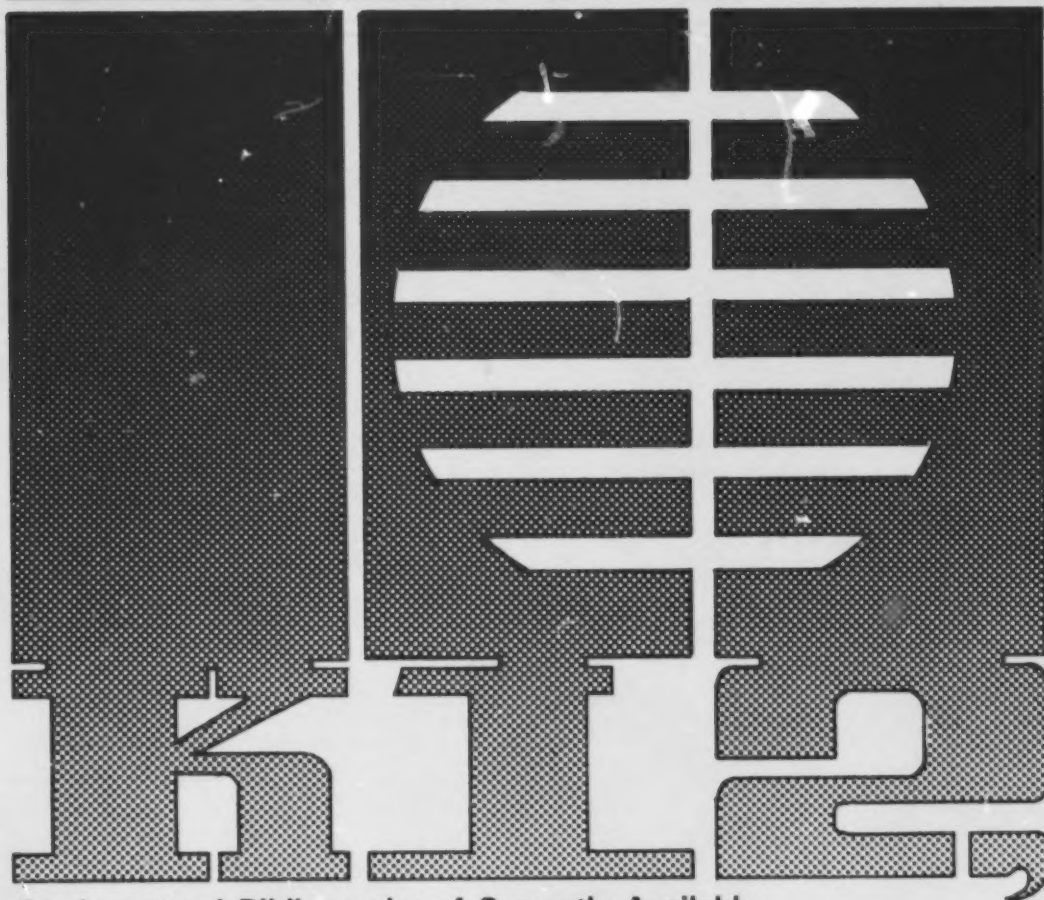
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May 1978

Volume 1

Energy Education Materials Inventory



**An Annotated Bibliography of Currently Available
Materials, K-12, Published Prior to May, 1976.**

Prepared for
U.S. Department of Energy
Assistant Secretary for Conservation
and Solar Applications
Office of Marketing and Education
Washington, DC 20545

Under Contract No. EC-77-C-01-8685

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INTRODUCTION

What is the Energy Materials Inventory (EEMI)? EEMI is a systematic listing of energy education materials and reference sources suitable for use in elementary and secondary schools. Items included in this volume were located through computer searches as of May 1976 and still were found to be available as of May 1, 1978.

An updated counterpart to this Volume I is now being developed by the Energy Institute, University of Houston, under contract with the U. S. Department of Energy (DOE). Volume II will include energy education materials, K-12, produced from May 1976 (the closing date of Volume I) through December 1978. This new volume will be available in the fall of 1979.

Also to be published at that time is an addendum to Volume I. It will include material published during the earlier period that is still available but which was not known previously due to established data bases from which the University of Houston was constrained to work.

The purpose of these inventories is to provide educators with a directory of energy resource materials. It is the hope of DOE that these and other energy education materials it is producing will hasten the inclusion of energy-focused learning in our Nation's schools.

How is the inventory organized? The inventory consists of three major parts: media (blue), grade level (yellow), and subject (orange). Each major part is divided into sections, as shown in the Table of Contents. Within each section, the citations are listed alphabetically by title.

What is in a citation? The citations in the Media section contain the information normally used by libraries and book-buyers to purchase materials, plus a short annotation. A typical entry in the Media section follows:

- | | |
|---|---|
| 1. Title and date | <u>ATOMIC ENERGY (1970)</u> |
| 2. Author's initial(s) and name (if applicable) | M. Gaines |
| 3. Source name and address | Grosset & Dunlap, Inc., Publishers
51 Madison Avenue
New York, NY 10010 |
| 4. Cost (if known) | \$4.49 |
| 5. Grade Level | Level: 8-12 |
| 6. Accompanying materials (if any) | |
| 7. Annotation | This book outlines the physical principles behind nuclear power. It also describes the peaceful uses of the atom. |

Citations in the Grade Level section and the Subject section are entered under the appropriate medium; citations in these sections include only the title and the page number within the media section where the full citation and annotation are to be found. If a teacher is interested in locating a basic film on electricity to be used in Kindergarten, he/she merely looks in the Grade Level section under Kindergarten and 16mm Films and moves down the list until an appropriate-sounding title is found, such as "Electricity for Beginners." The page number beside this title is 18; therefore, the teacher may refer to page 18 for the annotation to determine whether this film will meet the need of the class. If it will, the teacher finds the necessary information to order the film on page 18 also. A second approach is to look under the Subject Index under Biology, Chemistry, Physics and General Science under 16mm Films until an appropriate-sounding film is found. The procedure is then the same as outlined above.

Are there exceptions? Yes. Liberty was taken with the traditional imprint information. The actual distributor of the material was recorded if different from the publisher. (Because prices are subject to change, it would be wise for the potential user/purchaser to contact the distributor to verify them before ordering.)

Who compiled this inventory for DOE? In 1976, the Federal Energy Administration (now Department of Energy) awarded to Energy & Man's Environment, Inc. a contract to survey energy education materials, K-12. The contractor was to search out sources that had produced or listed energy material for classroom use, K-12, cite the title, source, cost, if available, and organize the inventory material by media. Approximately 4,000 classroom items appeared in the four booklets, with one booklet given to teacher reference sources.

In 1977, a contract was awarded to the Energy Institute of the University of Houston to verify the authenticity and availability of the items listed in the inventory, to annotate extant items, and to structure the document. This product is the result of that endeavor. During the verification and annotation phase, many items were determined to be no longer available or unsuitable for K-12 use as energy-education aids. These items were deleted. This fact plus the fact that some sources did not respond in time to be included reduced the original 4,000 items to approximately 800 items. (The dates of certain items are later than May 1976 due to revisions or continuations of material produced earlier.)

For information about currently available energy education materials published by the Department of Energy write to the U. S. Department of Energy, Technical Information Center, P. O. Box 62, Oak Ridge, Tennessee 37830. For a listing of films available on free loan, ask for the Energy Films Catalog; for a listing of free booklets and curriculum materials, ask for the Selected Department of Energy Publications.

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I. MEDIA

I. MEDIA

A. Audiovisual

1. Audiocassettes and Records

ALTERNATIVES TO BURNING

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$14.95

Level: 7-12

Dr. Robert Rienow discusses alternative methods of energy production. He concludes that we must find new approaches to energy production that do not pollute.

CONTEMPORARY AMERICAN SERIES: POPULATION & RESOURCES

Educational Record Sales, 157 Chambers Street,
New York, NY 10007

Price: \$6.50

Level: 7-12

On this album, a panel of educators discuss convergent problems of population increase and resource decline. The discussions provide a stimulus for class interaction or outside research.

DARKNESS FOR OUR CITIES

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$14.95

Level: 7-12

This is a discussion of America's energy crisis. Dr. Robert Rienow, an authority in environmental sciences, presents statistics that are frightening.

ENERGY & FOOD PRODUCTION: CONTEMPORARY TECHNOLOGY & ALTERNATIVES

American Association for the Advancement of Science Audiotape
Program, Dept. OA, 1515 Massachusetts Avenue NW
Washington, DC 20005

Price: \$36.00

Level: 11-12

This is a discussion of the relationship between energy consumption and food production. The importance of new production methods and technology is emphasized.

ENERGY & OUR ENVIRONMENT (1970)

Coronet Films, 65 E. So. Water Street, Chicago, IL 60601

Price: \$50.00

Level: 4-12

This tape introduces the problem of energy needs versus environmental concerns. A teacher's guide with teaching suggestions is included.

Audiocassettes and Records

ENERGY & SOCIETAL DEVELOPMENT

American Association for the Advancement of Science Audiotape
Program, Dept. QA, 1515 Massachusetts Avenue NW
Washington, DC 20005

Price: \$19.95

Level: 11-12

This is a taped lecture by Chauncey Starr (President, Electric Power Research Institute, Palo Alto, California). Mr. Starr explores changing energy demands as societal priorities change.

THE ENERGY CRISIS: SOME IMPLICATIONS & ALTERNATIVES

American Association for the Advancement of Science Audiotape
Program, Dept. QA, 1515 Massachusetts Avenue NW
Washington, DC 20005

Price: \$12.00

Level: 11-12

This is a three-hour taped dialogue between noted authorities (Dean Abrahamson, U. of Minnesota; James Fay, M.I.T.) which examines components of societal energy demand. Ideas for changing life-styles to reduce energy demand are explored.

THE EXPLOITATION OF NATURAL RESOURCES

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$12.00

Level: 10-12

This text reveals the exploitation of the resources of developing nations by the industrialized nations. It makes the point that the growing energy crisis has resulted from over-consumption of our non-renewable resources.

FREE LAND & ABUNDANT RESOURCES

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$12.95

Level: 10-12

This is an analysis of the roots of U.S. affluence and prosperity. Professor Peter Odegard speaks of how the American dream of equality and freedom was rooted in free land and abundant resources.

FUSION ENERGY: POWER OF THE FUTURE

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$12.95

Level: 7-12

In this text a panel discusses the prospects of fusion power. The panel has some skeptical questions, but the consensus is that fusion power offers great promise.

Audiocassettes and Records

FUSION POWER

American Association for the Advancement of Science Audiotape
Program, Dept. QA, 1515 Massachusetts Avenue NW
Washington, DC 20005

Price: \$19.95

Level: 11-12

This is a review of the U.S. program to develop a thermonuclear fusion power source. It explains the alternative forms such a generator might take and their environmental impact (Rolf Sinclair, National Science Foundation; Robert Bussard, U.S. Atomic Energy Commission)

HORSEPOWER

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$12.95

Level: 4-12

This documentary describes, contrasts, and measures the efficiency of different "power plants." Man makes many machines, but nature can show us some engineering marvels as well.

THE INTERNAL COMBUSTION ENGINE

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$12.95

Level: 4-12

This is the story of a series of unrelated discoveries adding up to one of the greatest or most destructive inventions of all time. It is the history of the cylinder and piston.

LET'S THINK ABOUT SCIENCE SERIES: PRETEND YOU'RE A MOLECULE & DANCE; HURRAH FOR THE SUN

Troll Associates, 320 Rt. 17, Mahwah, NJ 07430

Price: \$5.50 each

Level: 1-4

In these cassettes, science concepts are introduced to children through enjoyable activities. These activities introduce molecular action and structure.

NON-NUCLEAR ENERGY FOR DEVELOPMENT: SESSIONS I-IV

American Association for the Advancement of Science Audiotape
Program, Dept. QA, 1515 Massachusetts Avenue NW,
Washington, DC 20005

Price: \$19.95/first session

Level: 11-12

\$16.95/each additional session

This is a taped discussion of the current and future world energy situation as it affects the Americas. Particular attention is given to the developing nations. (J. Fredrick Weinhold, Ford Foundation; Edmundo de Alba, National Council of Science & Technology, Mexico)

Audiocassettes and Records

OIL FROM THE OCEANS: PROMISES & PROSPECTS

American Association for the Advancement of Science Audiotape Program, Dept. QA, 1515 Massachusetts Avenue NW, Washington, DC 20005

Price: \$18.00

Level: 11-12

This is a taped discussion of the potential for increased offshore oil production. The focus is on problems to be overcome and the technology needed.

OUTER SPACE

Children's Book & Music Center, 5373 W. Pico Blvd., Los Angeles, CA 90019

Price: \$8.95

Level: K

This short play allows students to become involved at different learning levels. It is a multimedia experience which introduces basic energy-flow concepts.

THE PLACE OF NUCLEAR POWER

The Center for Cassette Studies, 8110 Webb Avenue, N. Hollywood, CA 91605

Price: \$14.95

Level: 7-12

Some predict that fission energy is merely an interim source and they insist that fission will give way to fusion power in a few decades. Others insist that breeder reactors, which produce their own fuel, will take over energy production.

POWER FOR THE PEOPLE

The Center for Cassette Studies, 8110 Webb Avenue, N. Hollywood, CA 91605

Price: \$15.95

Level: 10-12

Human and beast, wind and water, sunbeams and atoms - all have been harnessed to produce power, but we are still in danger of running short. This cassette explains how this situation came about and some of the new ways being devised to cope with it.

POWER GENERATION & ENVIRONMENTAL CHANGE: RECONCILING MAN'S DESIRE FOR POWER WITH THE NEEDS OF HIS ENVIRONMENT: SESSIONS I-II

American Association for the Advancement of Science Audiotape Program, Dept. QA, 1515 Massachusetts Avenue NW, Washington, DC 20005

Price: \$19.95/first session

Level: 11-12

\$16.95/second session

This tape discusses three alternative means of power generation - nuclear, hydroelectric, and fuel combustion. The emphasis is on controlling the environmental effects of each. (Arthur Squires, City College of The City University of New York; David Berkowitz, MITRE Corp.)

Audiocassettes and Records

THE RESOURCES OF POWER

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$15.95 Level: 10-12

This is an examination of the use and abuse of power stemming from the ownership and exploitation of natural resources. It focuses on the underdeveloped world and Canadian-American relations.

RESOURCES TODAY & TOMORROW

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$15.95 Level: 10-12

This cassette points out that many of the world's resources are being consumed in an irreversible manner at increasing rates. It emphasizes that technological development will place an intensifying demand on the finite human environment.

SCIENTIST DIXY LEE RAY

The Center of Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$16.95 Level: 7-12

In this cassette, Dr. Dixy Lee Ray predicts that sixty percent of our energy will be nuclear supplied by the year 2000, pollutant free and safe. She answers objections to atomic plants by pointing out that it took eons for primitive cultures to overcome fear of fire and that new logic and planning systems can insure safety.

THE SEARCH FOR OIL

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$12.95 Level: 4-12

This is a story of the discoveries and advancements in oil production. It tells the story of oil from prehistoric times to its evolution as the life blood of the modern mechanical age.

SHAVING THE FACE OF THE EARTH

The Center for Cassette Studies, 8110 Webb Avenue,
N. Hollywood, CA 91605

Price: \$16.95 Level: 10-12

In every state of the Union, mountains have been reduced to ugly rubble, rivers have been polluted and wildlife has been destroyed by strip mining. In this cassette, Harry Caudill points out some evils of strip mining.

Audiocassettes and Records

SOLAR ENERGY: AN INTERDISCIPLINARY SOCIETAL OPPORTUNITY

American Association for the Advancement of Science Audiotape
Program, Dept. QA, 1515 Massachusetts Avenue NW,
Washington, DC 20005

Price: \$36.00

Level: 11-12

This tape offers an in-depth discussion of the potential of solar energy. It emphasizes the opportunity for various disciplines to interact in the development of needed technology.

WORKING GIANTS: THE STORY OF PRODUCTS & RESEARCH

Troll Associates, 320 Rt. 17, Mahwah, NJ 07430

Price: \$33.00

Level: 4-6

This audiocassette series explains how basic products and resources, such as aluminum, paper, and oil help in our daily lives. Production processes are described in non-technical language.

I. MEDIA

A. Audiovisual

2. 16mm Films and Videocassettes

A IS FOR ATOM

Glenville Film Center, 705 Corporations Park,
Scotia, NY 12302

Price: \$200.00/purchase

Level: 7-12

This film illustrates how heat from controlled fission can produce electrical power; how nuclear energy is used in ships, applied in space, agriculture, medicine, industry, and research areas. Electrical forces that hold the atom together are also explained.

*Available on free loan from the DOE Film Library, P. O. Box 62,
Oak Ridge, Tennessee 37830

ALASKA: END OF THE LAST FRONTIER

Xerox Films, 245 Long Hill Road, Middleton, CT 06457

Price: \$190.00/purchase

Level: 5-12

This is an eleven-minute color documentary film. It describes the efforts of Alaskans to maintain the natural quality of their environment in the face of encroaching civilization.

ALASKAN PIPE DREAM

Time-Life Multimedia, Time-Life Building, New York, NY 10020

Price: \$330.00/purchase

Level: 9-12

This film explores the controversial construction of the Alaskan pipeline. It focuses on the danger to wildlife and to the Eskimo culture.

ALTERNATIVE ENERGY SOURCES

Indiana University, Audio-Visual Center,
Bloomington, IN 47401

Price: \$315.00/purchase

Level: 9-12

\$ 12.50/rental

This film examines existing and proposed energy alternatives. It focuses on experimental solar energy, coal conversion, and-geothermal steam-gathering plants.

ANATOMY OF A POWER PLANT

Utah Power and Light Co., 1407 West North Temple St.,
P. O. Box 899, Salt Lake City, UT 84110

Price: free loan

Level: 10-12

This film documents construction of the Huntington Power Plant. It shows progress in construction of plant elements such as the dam, cooling towers, and the boiler.

16mm Films and Videocassettes

ASCENT OF MAN SERIES: WORLD WITHIN WORLD

Time-Life Multimedia, Time-Life Building, New York, NY 10020
Price: \$750.00/purchase (film) Level: 9-12
\$375.00/purchase (videotape)
\$100.00/rental

This film looks at the inside of the atom. It explains the men and ideas that have contributed to twentieth-century physics.

ATMOSPHERIC ELECTRICITY

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603
Price: \$286.00/purchase Level: 9-12
This twenty-six minute color/sound film shows the atmosphere in its constant state of electrical agitation. Thunderstorms are depicted as the primary source of atmospheric electricity.

THE ATOM & THE ENVIRONMENT

Handel Film Corporation, 8730 Sunset Blvd.,
West Hollywood, CA 90069
Price: \$270.00/purchase Level: 10-12
This film explains how the atom is being used to help protect our environment. It explains how the atom is used in the tracing of oil slicks, in water pollution studies, and in the development of insecticides that are not harmful to humans and other mammals.
*Available on free loan from the DOE Film Library, P. O. Box 62,
Oak Ridge, Tennessee 37830

THE ATOM & ITS PARTS

Richard Cline Film Productions, 3290 S. Williams,
Englewood, CA 80110
Price: \$273.00/purchase Level: 10-12
\$ 15.75/rental
This film presents the particle concept of matter as it evolved in the twentieth century. The experiments and theories of Dalton, Avogadro, Thompson, Millikan, Rutherford, Bohr, and DeBroglie are explained using animation.

ATOMIC ENERGY FOR SPACE

Handel Film Corporation, 8730 Sunset Blvd.,
West Hollywood, CA 90069
Price: \$230.00/purchase Level: 10-12
This is an animated film. It explains the fission process, the nuclear power reactor, the isotopic space generator, and "SNAP" devices (Systems for Nuclear Auxiliary Power).

16mm Films and Videocassettes

ATOMIC ENERGY: INSIDE THE ATOM

Encyclopedia Britannica Ed. Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$185.00/purchase
\$ 12.00/rental

Level: 4-9

Evidence that there is energy inside the atom is presented through simple experiments. The film shows how radioactive substances can be used in medicine, to produce heat, power, light, and that radiation can do work because it carries energy.

ATOMIC POWER PRODUCTION

Handel Film Corporation, 8730 Sunset Blvd.,
West Hollywood, CA 90069

Price: \$180.00/purchase

Level: 10-12

This film is a basic introduction to the method of producing electricity from the atom. It uses animated descriptions of processes.

AUDUBON WILDLIFE THEATRE SERIES: NORTHWEST TO ALASKA

A-V Explorations, Inc., 2000 Eggert Rd., Amherst, NY 14226
Price: \$325.00/purchase

Level: 7-12

This is a documentary on the wildlife of Northwestern North America. It focuses on habitat and life cycles and makes inferences about man's intrusion into wild areas.

AUTO MANIA 2000

McGraw-Hill Films, 1221 Avenue of the Americas,
New York, NY 10020

Price: \$160.00/purchase
\$ 15.00/rental

Level: 9-12

This satirical, animated film contemplates the near future when everyone has a car and civilization has turned into one gigantic traffic jam. It is a plea against pollution and waste.

BEFORE THE MOUNTAIN WAS MOVED

McGraw-Hill Films, 1221 Avenue of the Americas,
New York, NY 10020

Price: \$695.00/purchase
\$ 35.00/rental

Level: 6-12

This is the story of conservation efforts in West Virginia. The result was strong state legislation for environmental conservation.

16mm Films and Videocassettes

BASIC LOW TEMPERATURE PHYSICS & CRYOGENICS

Richard Cline Film Productions, 3290 S. Williams,
Englewood, CA 80110

Price: \$259.00/purchase
\$ 13.50/rental

Level: 10-12

This film covers the kinetic theory of heat. Temperature measurement and scale relationships are explained through animation and live scenes.

BATE'S CAR

Arthur Mokin Productions, Inc., 17 W. 60th Street,
New York, NY 10023

Price: \$230.00/purchase
\$ 30.00/rental

Level: 7-12

This film describes the use of methane gas to power an automobile. Mr. Bate shows how to change manure to a fuel that will power his car.

THE BIG SUN & OUR EARTH

Coronet Films, 65 E. So. Water Street, Chicago, IL 60601

Price: \$150.00/purchase

Level: K-3

This is a ten-minute film in which a young boy learns basic concepts about the sun and how it affects the earth. He observes how the earth's environment changes as life systems respond to light and darkness.

BLACK COAL, RED POWER

Indiana University, Audio-Visual Center, Bloomington, IN 47401

Price: \$390.00/purchase (film)
\$275.00/purchase (videocassette)
\$ 15.25/rental

Level: 9-12

This film describes the strip mining of coal on Navajo and Hopi reservations. The process destroys the natural economy of the Indians and the ecological balance of the land.

BOTTOM OF THE OIL BARREL

Time-Life Multimedia, Time-Life Bldg., New York, NY 10020

Price: \$425.00/purchase (film)
\$215.00/purchase (videocassette)
\$ 40.00/rental

Level: 9-12

This film shows that we presently lack the technology and the will to depart from an oil-based economy and how some alternatives proposed so far are inadequate or unsound. It is a thorough investigation of the oil crisis.

16mm Films and Videocassettes

BROTHER FRANCIS & SISTER EARTH

Mass Media Ministries, 2116 North Charles Street,
Baltimore, MD 21218

Price: \$250.00/purchase
\$ 25.00/rental

Level: 6-12

The philosophy of St. Francis of Assisi serves as the essential point of departure in this documentary. It shows the threats to human survival in the ecology-energy crisis.

BUILT-IN BLACKOUT

Indiana University, Audio-Visual Center
Bloomington, IN 47401

Price: \$235.00/purchase
\$ 13.50/rental

Level: 9-12

This film examines the conditions which demand cooperation between power companies and public power agencies. Such cooperation should avoid future major blackouts.

BURN, BURY, OR WHAT?

Stuart Finley, Inc., 3428 Mansfield Road,
Falls Church, VA 22041

Price: \$225.00/purchase
\$ 22.50/rental

Level: 7-12

This twenty-minute color/sound film documents what was done to solve solid waste problems in the Washington, D.C. area. A model sanitary landfill was created as citizens became responsible environmental caretakers.

CHALLENGE IN THE EARTH

Association-Sterling Films, Texas Distribution Center,
8615 Directors Row, Dallas, TX 75237

Price: Free loan

Level: 7-12

This thirty-minute film portrays the development of the metals and minerals industry since 1899. It combines historical glimpses from motion picture archives with scenes from modern operations around the world.

CHALLENGE OF THE ARCTIC

Atlantic Richfield Co., P. O. Box 1346, Houston, TX 77001

Price: Free loan

Level: 10-12

This film describes problems of mineral recovery in the arctic. Focus is on the interplay between need for new raw materials and environmental concerns.

16mm Films and Videocassettes

CHALLENGE OF THE FUTURE

Department of Energy Film Library, Technical Information Ctr.,
P. O. Box 62, Oak Ridge, TN 37830

Price: Free loan Level: 7-12

We are entering a new age when energy will be more expensive and less abundant. This film's purpose is to look at the problem and detail the options that face the nation.

CHEMICAL CHANGES ALL ABOUT US

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$210.00/purchase Level: 4-9

This film describes the nature of chemical change with resultant new substances and energy release. It illustrates many familiar chemical changes.

CHEROKEE SHAFT

McGraw-Hill Films, 1221 Avenue of the Americas,
New York, NY 10020

Price: \$590.00/purchase Level: 9-12
\$ 30.00/rental

This film is about mine safety. It includes interviews with both sides in the controversy between union leadership in the UMW, and provides an insight into the coal industry.

A CITY IS PEOPLE

Stuart Finley, Inc., 3428 Mansfield Road,
Falls Church, VA 22041

Price: \$225.00/purchase Level: 7-12
\$ 22.50/rental

This twenty-two minute color film describes revitalization of an inner city area. Urban renewal and private projects have made the area an acceptable living environment.

CLIMATE & THE WORLD WE LIVE IN

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$190.00/purchase Level: 4-9

This twenty-minute film shows factors that determine climate. It demonstrates how climate affects human activity.

16mm Films and Videocassettes

COAL & WATER

Stuart Finley, Inc., 3428 Mansfield Road,
Falls Church, VA 22041

Price: \$200.00/purchase
\$ 20.00/rental

Level: 7-12

This twenty-three minute sound/color film describes how acid drainage and black water from coal mines create serious stream pollution. Effective conservation and pollution control measures are shown for active and abandoned deep mines and strip mines.

COAL CONNECTION

Utah Power & Light Co., 1407 West North Temple Street,
Salt Lake City, UT 84110

Price: Free loan

Level: 10-12

This film documents electrical generation methods with emphasis on coal as a primary fuel. It shows how generated heat is used to produce steam to spin turbines.

COLORADO RIVER (2nd Edition)

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$190.00/purchase

Level: 7-12

This twelve-minute film shows various uses of the Colorado River. It focuses on power generation and agriculture.

COLUMBIA RIVER

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$165.00/purchase

Level: 4-9

This eleven-minute film introduces the Columbia River System, the world's largest single source of hydroelectric power. Included is a historical perspective on the development of the river.

COMBUSTION

Sutherland Learning Associates, 14654 Oxnard Street,
Van Nuys, CA 91411

Price: \$165.00/purchase

Level: 7-12

This short film introduces the principles of combustion. It is suitable for use in physics, chemistry, or physical science classes.

16mm Films and Videocassettes

COMPOSITION

Mass Media Assoc., Inc., 1720 Chouteau, St. Louis, MO 63103

Price: \$135.00/purchase

Level: 9-12

\$ 15.00/rental

This film uses musical narration. It is a color montage of the earth's majesty and its exploitation by man.

CONSERVING OUR ENVIRONMENT: USE & REUSE

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$205.00/purchase

Level: 4-9

In this film a young boy learns about ecology by observing the ecosystem in a fishbowl. He discovers how man must relate to his environment.

CONSERVING OUR MINERAL RESOURCES TODAY

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$145.00/purchase

Level: 4-8

Dwindling resource supplies are surveyed in this short film. It illustrates need for conservation and development of alternative power sources.

COPING WITH TOMORROW SERIES: SUPERCONDUCTORS: TOMORROW'S ENERGY BREAKTHROUGH IS HERE

Paramount Communications, 5451 Marathon St.,

Hollywood, CA 90038

Price: \$320.00/purchase

Level: 6-12

Gives an explanation of what superconductors are and an introduction to some of the ways they may serve us in the near future.

Superconductors may clean up pollution in air and water, make possible deep brain surgery, provide power through special generators, or solve the rapid transit problem.

THE CROOKED RAILROAD: HYDROELECTRIC POWER FROM A GLACIER

Martin Moyer Productions, 900 Federal Ave., Seattle, WA 98102

Price: \$160.00/purchase

Level: 3-6

In this film a method of harnessing water power from glaciers is shown. A comprehensive teacher's guide is included.

DAY AFTER TOMORROW

Great Plains Instructional TV Library, Box 80669,

Lincoln, NE 68501

Price: \$20.00/rental

Level: 7-12

World population growth, shortages of oil and gas, and rising costs of energy are prompting an intense search for alternate energy sources. The sources shown in this film are solar, geothermal, and atomic.

DECORATIVE WOODS & FUEL

Martin Moyer Prod., 900 Federal Ave., Seattle, WA 98102
Price: \$250.00/purchase Level: 3-12
This is one part of a film series dealing with various uses of forest products. Sequences in this film show which woods burn efficiently and produce good charcoal.

DEFIANCE

University of Southern California, Film Distribution Center,
Division of Cinema, University Park, Los Angeles, CA 90007
Price: \$78.00/purchase Level: 9-12
\$10.00/rental
This film is a graphic portrayal of oil pollution. It utilizes creative camera and editing techniques.

DISCOVERY OF RADIOACTIVITY

International Film Bureau, Inc., 332 So. Michigan Ave.,
Chicago, IL 60604
Price: \$225.00/purchase Level: 9-12
\$ 12.00/rental
This film moves from a survey of early experiments with radioactivity to a more theoretical presentation of radioactive decay. The film also provides an explanation of alpha, beta, and gamma rays.

DON'T CUT US OFF

Department of Energy Film Library, Technical Information Center,
P. O. Box 62, Oak Ridge, TN 37830
Price: frer loan Level: 7-12
This film documents the activities of four communities to solve a common national problem. The problem is the high cost of energy as it affects the poor and elderly across the nation.

THE EARTH: RESOURCES IN ITS CRUST

Coronet Films, 65 E. So. Water St., Chicago, IL 60601
Price: \$160.00/purchase Level: 6-9
This ten-minute film surveys the major organic and mineral substances in the earth's crust. Conservative utilization of resources is emphasized.

EARTHWATCH FROM NAIROBI from BILL MOYERS' INTL. JOURNAL

WNET Media Services, 356 W. 58th St., New York, NY 10019
Price: \$550.00/purchase Level: 10-12
\$ 60.00/rental
This sixty-minute color film with Bill Moyers focuses on Africa. Mr. Moyers reports on the United Nations program to monitor the earth's environment and resources to help insure a humane future.

16mm Films and Videocassettes

EDISON: PERSISTENT GENIUS

Aims Instructional Media, Inc., 626 Justin Ave.,
Glendale, CA 91201

Price: \$225.00/purchase

Level: 4-9

This film portrays the role of science and research in bringing about change in our way of life. It dramatizes Thomas Edison's development of electric lighting, stressing the research and investigation involved, and his persistence in meeting the challenges and problems.

ELECTRIC INTERACTIONS IN CHEMISTRY

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$265.00/purchase

Level: 9-12

This twenty-one minute color/sound film discusses electric force over distance.

ELECTRIC SAFETY FROM A TO ZAP

Perennial Education, Inc., 477 Roger Williams,
P. O. Box 855 Ravinnia, Highland Park, IL 60035

Price: \$130.00/purchase

Level: 1-6

\$ 13.00/rental

This color-animation film runs ten minutes. It introduces electricity by focusing on what electric power is, how it travels through homes, and electrical hazards and safety precautions.

ELECTRICITY

Walt Disney Media Co., 500 So. Buena Vista St., Burbank, CA 91521

Price: \$210.00/purchase

Level: 1-4

This film explains where electricity goes before it reaches the home. It also illustrates how electricity is generated.

ELECTRICITY--A SERIES: DISTRIBUTION

Indiana University, Audio-Visual Center, Bloomington, IN 47401

Price: \$210.00/purchase

Level: 6-12

\$ 9.25/rental

This series develops the fundamentals of electricity. The film shows how electricity is distributed to home and industry.

ELECTRICITY--A SERIES: MEASUREMENT

Indiana University, Audio-Visual Center, Bloomington, IN 47401

Price: \$160.00/purchase

Level: 6-12

\$ 8.00/rental

This series develops the fundamentals of electricity. The film shows how electricity is measured in the laboratory, home, and industry.

16mm Films and Videocassettes

ELECTRICITY--A SERIES: PRODUCTION

Indiana University, Audio-Visual Center,
Bloomington, IN 47401

Price: \$210.00/purchase Level: 6-12
\$ 9.25/rental

This series develops the fundamentals of electricity. This film deals with the production of electricity.

ELECTRICITY--A SERIES: STATIC

Indiana University, Audio-Visual Center,
Bloomington, IN 47401

Price: \$160.00/purchase Level: 6-12
\$ 6.75/rental

This series of films develops the fundamentals of electricity. The film deals with the uses and discovery of static electricity.

ELECTRICITY ALL ABOUT US

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$205.00/purchase Level: K-6

This twelve-minute presentation covers methods for making electricity work for us. It includes circuit breakers, fuses, and illustrates the difference between current electricity and static electricity.

ELECTRICITY AND HOW IT IS MADE

Encyclopedia Britannica Ed. Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$220.00/purchase Level: 1-4
\$ 14.00/rental

This film illustrates how electricity is produced, what it does, and how it is used to give us light, heat, sound, and power. Both static and current electricity are illustrated through a series of simple demonstrations.

ELECTRICITY BY MAGNETISM

Joe Kelley Film Prod., 4806 Ave. C, Corpus Christi, TX 78410

Price: \$285.00/purchase Level: 6-12

This film shows how electricity is produced by magnetism. It can be used as background material in physics.

16mm Films and Videocassettes

ELECTRICITY FOR BEGINNERS

Coronet Films, 65 E. So. Water St., Chicago, IL 60611

Price: \$160.00/purchase

Level: K-3

This ten-minute film with simple demonstrations illustrates the basic concept of electricity. Emphasis is on safety.

ELECTRICITY FROM CHEMICALS

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$210.00/purchase

Level: 4-6

This fourteen-minute film explains how chemical reactions cause electrons to move through a cell. It includes a description of various types of batteries.

ELECTRICITY--HANDLE WITH CARE

Handel Film Corp., 8730 Sunset Blvd.,

West Hollywood, CA 90069

Price: \$220.00/purchase

Level: 4-9

Animated and live examples explain the basic principles of electricity. Stress is on specific danger areas such as fuses, overloading, grounding, and improper repairs.

ELECTRICITY: HOW IT IS GENERATED

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase

Level: 5-9

Using a simple model, basic principles of electrical generation are illustrated. Commercial production of electricity is described.

ELECTRICITY: PRINCIPLES OF SAFETY

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00

Level: 7-9

This ten-minute film stresses common electrical hazards and their causes. It shows how injury can be prevented through proper knowledge of electricity.

ELECTRICITY WIRES IN YOUR HOME

Aims Instructional Media, Inc., 626 Justin Ave.,

Glendale, CA 91201

Price: \$155.00/purchase

Level: 1-6

This film provides a behind-the-walls study of the wires in a home. It follows the power poles across town to the generator station with an explanation of how electricity works.

16mm Films and Videocassettes

ELECTROCHEMICAL REACTIONS

Coronet Films, 65 E. So. Water St., Chicago, IL 60601
Price: \$195.00 Level: 10-12
This thirteen-minute film explains transformations between chemical and electrical energy. Ionization is also reviewed.

ELECTRO-MAGNET

International Film Bureau, Inc., 332 S. Michigan Ave.,
Chicago, IL 60604
Price: (not available at printing) Level: 9-12
This film examines the principles and uses of electro-magnets, the production of magnetic fields when electric current is passed through wire. The effects of a soft iron core and a hard steel core are contrasted.

ELECTROMAGNETIC INDUCTION

Coronet Films, 65 E. So. Water St., Chicago, IL 60601
Price: \$190.00/purchase Level: 10-12
This is a twelve-minute examination of the process by which an electromotive force is produced by a conductor. Included are applications of electromagnetic induction.

ELECTROMAGNETS AND THEIR USES

Coronet Films, 65 E. So. Water St., Chicago, IL 60601
Price: \$165.00/purchase Level: 4-6
This eleven-minute film shows applications of electromagnets. Included is the effect of current direction on polarity.

ENERGY

American Gas Association, 1515 Wilson Blvd.,
Arlington, VA 22209
Price: free loan Level: 6-12
This film traces energy sources from the first primitive fires through the fossil fuel era to atomic energy, outlines problems, and proposes possible solutions. For environmental uses, it is a good "thought-provoker".

ENERGY

BFA Educational Media, P. O. Box 1795, Santa Monica, CA 90406
Price: \$18.00/rental Level: 7-12
Through artistic analysis, the film examines the interplay of forces by which different parts of matter affect each other's movements. It develops an awareness of the universal role played by energy in physical processes.

16mm Films and Videocassettes

ENERGY

Gateway Prod., Inc., Univ. of Arizona, Bureau of Audio-Visual,
Tucson, AZ 85721

Price: \$60.00/purchase

Level: K-3

This film shows how different forms of energy make things move. Illustrations include muscles, springs, gasoline, steam, air, and water.

ENERGY: A FIRST FILM

BFA Educational Media, P. O. Box 1795, Santa Monica, CA 90406

Price: \$15.00/rental

Level: 4-6

This film illustrates that most of our energy comes from the sun. Green plants use energy from the sun to produce materials that we find useful as foods.

ENERGY: A MATTER OF CHOICES

Encyclopedia Britannica Ed. Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$290.00/purchase
\$ 17.00/rental

Level: 7-12

Focusing on the shortage of electrical power, this film examines the social attitudes and technological forces which have led to the crisis. This twenty-two-minute film then suggests alternatives which could help overcome the crisis.

ENERGY & ITS FORMS

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase

Level: 4-6

This ten-minute film explains the basic concepts of energy and shows examples of its principle forms, including nuclear energy. Energy conversion in power plants is covered.

ENERGY & LIFE

Ward's Natural Science Establishment, Inc., P. O. Box 14603,
Rochester, NY 14603

Price: \$240.00/purchase

Level: 7-12

This film concentrates on the basic laws of energy conversion from one organism to another and emphasizes the interdependence of nature. The use of fuel by man is discussed.

16mm Films and Videocassettes

ENERGY & LIVING THINGS

Centron Films, 1619 W. 9th St., Lawrence, KS 66044

Price: \$165.00/purchase Level: 4-8

In tracing solar energy through plants to herbivores, to carnivores, to various decomposers and finally to fossil fuels, the film poses questions about man's energy requirements and his use of the remaining fossil fuel reserves. It is also available in Spanish.

ENERGY & MOTION

Great Plains Instructional TV Library, Box 80669,
Lincoln, NE 68501

Price: \$25.00/rental Level: K-2

This is a fundamental explanation of energy. It explains motion as a result of the application of energy.

ENERGY & POWER: A FIRST LOOK

Journal Films, Inc., 930 Pinter Ave., Evanston, IL 60202

Price: \$135.00/purchase Level: 1-6

This film introduces the student to the many ways in which man harnesses energy and increases his capacity to do work. It emphasizes the early discoveries of simple machines and shows man's first utilization of the energy stored within wood, running water, and wind.

ENERGY & WORK

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$150.00/purchase Level: 4-9
\$ 12.00/rental

This film demonstrates some characteristics of energy: its ability to do work, its capacity to be stored, and kinetic energy. It is also available in Spanish.

ENERGY - CAN'T DO WITHOUT IT

McGraw-Hill Films, 1221 Avenue of The Americas,
New York, NY 10020

Price: \$225.00/purchase Level: 4-7
\$ 12.50/rental

This film relates energy to machines and the work they do. It focuses on our dependence on machines and the fossil fuels that power them.

ENERGY CONSERVATION FOR THE HOME, OR, HOW TO LOWER YOUR
UTILITY BILL

Genesys Systems, Inc., 1121 East Meadow Dr.,
Palo Alto, CA 94303

Price: \$810.00/purchase Level: 10-12
\$ 2.50/accompanying study manual

This four-hour videotape program is a short course in methods of saving energy in the home. It is suited for use in science or home economics.

ENERGY CRISIS

Journal Films, Inc., 930 Pinter Ave., Evanston, IL 60202

Price: \$175.00/purchase Level: 7-12

This film reviews the different energy sources and indicates the length of time we may be able to depend on them. It describes new ways of generating nuclear fueled electrical power.

ENERGY CRISIS: THE NUCLEAR ALTERNATIVE

Xerox Films, Inc., 245 Long Hill Road, Middletown, CT 06457

Price: \$595.00/purchase Level: 7-12

This is a fifty-two-minute color film narrated by Frank Reynolds. The film looks at all sides of the nuclear power controversy, especially the environmental issues.

ENERGY, ECONOMICS, ENVIRONMENT

Modern Talking Picture Service, Inc., 2323 New Hyde Park Road,
New Hyde Park, NY 11040

Price: Free loan Level: 9-12

This film shows the interrelationship among energy, economics, and the environment. The problems are shared and solutions must come from mutual endeavors.

ENERGY FOR THE FUTURE

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$220.00/purchase Level: 4-12

Constantly growing energy needs, dwindling reserves of fossil fuels, fuel shortages, and increased cost--such conditions have established a need for new energy sources. Future energy alternatives of shale oil, geothermal heat, nuclear fission, and fusion, wind and solar energy are examined.

16mm Films and Videocassettes

ENERGY: HARNESSING THE SUN

University of California, University Extension,
2223 Fulton Street, Berkeley, CA 94720

Price: \$20.00/rental Level: 9-12

This film serves as a simple introduction to explain various proposals for harnessing solar energy to generate electricity. Interviews with experts provide a perspective on the role of solar energy in meeting the world's present and future energy needs.

ENERGY - THE AMERICAN EXPERIENCE

Department of Energy Film Library, Technical Information
Center, P. O. Box 62, Oak Ridge, TN 37830

Price: Free loan Level: 7-12

This film's purpose is to show the development of different forms of energy under the unique conditions of the American experience. We see the sixty-year changing cycles of energy sources from wood to coal to oil and gas.

ENERGY: THE DILEMMA

Churchill Films, 662 N. Robertson Blvd.,
Los Angeles, CA 90069

Price: \$1,050.00/purchase Level: 7-12

This is a presentation of energy growth patterns--past, present, and future. Problems of supply and demand are explored, as well as our economic and social dependency on these evaporating fuel sources.

ENERGY SOURCES OF THE FUTURE

McGraw-Hill Films, 1221 Avenue of the Americas,
Chicago, IL 10020

Price: \$240.00/purchase Level: 4-7
\$ 12.50/rental

This film examines the need for new ways to provide for growing energy needs. It focusses on new trends and ideas in energy production.

ENERGY TO BURN

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$20.00/three-day loan Level: 4-12

This film is designed to serve as an introduction to the serious study of energy. It should serve as a data base for classroom debate and discussion.

16mm Films and Videocassettes

ENERGY: TOWARDS THE AGE OF ABUNDANCE

University of California, University Extension,
2223 Fulton Street, Berkeley, CA 94720

Price: \$28.00/rental

Level: 9-12

This film documents growing energy needs and use, especially in North America, and surveys possible future energy sources, focusing on nuclear fission and controlled fusion reactors, but including tidal power, solar energy, and other sources. It also explores criticisms of nuclear power by conservationists and local residents.

ENERGY VS ECOLOGY

Modern Talking Picture Service, Inc., 2323 New Hyde Park Rd.,
New Hyde Park, NY 11040

Price: Free loan

Level: 10-12

Coal is the most abundant source of energy in this country. This film indicates how we can utilize this valuable source without disrupting our environment.

ENGINES & HOW THEY WORK

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase

Level: 4-8

This short film covers operating principles of various types of engines--gasoline, steam, diesel, etc. It focuses on the importance of engines.

ENTER WITH CAUTION: THE ATOMIC AGE

MacMillan Films, Inc., 34 MacQuesten Parkway South,
Mount Vernon, NY 10550

Price: \$330.00/purchase

Level: 10-12

This is a two-part, black-and-white film. It details an atomic accident and what happened to the people involved.

EXPLORING ELECTROMAGNETIC ENERGY

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$15.00/three-day loan

Level: 4-12

This is an introduction to electromagnetic energy. It shows some of the ways in which we use electromagnetic energy every day.

EXPLORING THE ATOMIC NUCLEUS

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$190.00/purchase

Level: 7-12

This film examines the composition of protons and neutrons. It shows how scientists are detecting and analyzing particle interaction.

16mm Films and Videocassettes

FIRE SCIENCE

Churchill Films, 662 N. Robertson Blvd.,
Los Angeles, CA 90069

Price: \$190.00/purchase Level: K-9

This film introduces the chemistry of combustion. It explains fuel, oxidation, kindling temperature and spontaneous combustion.

THE FIRE TRIANGLE

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$15.00/three-day loan Level: 7-12

Fuel, heat, and air are the three elements that make up the "fire triangle." Before a fire can start, these three elements must be present.

A FIRST FILM ON THE WIND

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$15.00/three-day loan Level: K-3

We cannot see the wind, but we can see what it does. As it moves over the city and countryside, it lifts our kites, dries the washing on the line, and shakes the trees.

FOCUS ON ENERGY

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: Free loan Level: 7-12

This film reviews our dependence on energy with an emphasis on natural gas. It describes possible solutions to the current supply problem.

FOOD CYCLE & FOOD CHAINS

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase Level: 7-12

This film combines animation and live action. It illustrates the food chain dependency on green plants.

FOOD, ENERGY, & YOU

Perennial Education, Inc., 477 Roger Williams,
P. O. Box 855 Revinia, Highland Park, IL 60035

Price: \$295.00/purchase (film or video) Level: 4-9
\$ 29.50/rental (film or video)

This twenty-minute color film with animation focuses on photosynthesis, the basic process by which plants store energy. It shows how photosynthesis ultimately sustains humans.

16mm Films and Videocassettes

FOOD: ENERGY FROM THE SUN

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$15.00/three-day loan

Level: 4-8

The energy which is needed by living things comes from the sun. We get our energy from eating plants as well as meat from animals which feed on plants.

FOOD FROM THE SUN

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$150.00/purchase
\$ 12.00/rental

Level: 1-6

Fundamental photosynthesis concepts are explored. Also shown is how the sun's energy is used by animals.

FORCES

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$185.00/purchase
\$ 12.00/rental

Level: 4-9

To demonstrate forces, children play tug of war, and push a huge beach ball. Demonstrations prove that three kinds of forces act between objects not touching: magnetism, electricity, and gravity.

FORCES MAKE FORMS

Film Fair Communications, 10900 Ventura Boulevard,
Studio City, CA 91604

Price: \$175.00/purchase

Level: 4-8

Unusual and everyday objects and events are used to encourage critical observation and logical association between forces and the resultant forms. The multiplicity of interpretations of the images allows the film to be used from the primary through upper grades.

FUNDAMENTALS OF AC, DC GENERATION

Glenville Film Center, 705 Corporations Park,
Scotia, NY 12302

Price: \$225.00/purchase

Level: 7-12

This film uses animation and laboratory experiments to present fundamentals. The concepts included are electromagnetic induction, Fleming's right-hand rule, and the three factors that determine the total induced voltage.

16mm Films and Videocassettes

FUSION: THE ELECTRIC & INFINITE FUTURE

University of California, University Extension,
2223 Fulton Street, Berkeley, CA 94720

Price: \$28.00/rental Level: 9-12

This film examines the problems and possibilities of using fusion power as a source of energy. It explains the difference between fission and fusion, and includes commentary favoring and opposing fusion power.

GENERATOR & THE MOTOR

Universal Education and Visual Arts,
100 Universal City Plaza, Universal City, CA 91608

Price: \$176.00/purchase Level: 7-12

This is a detailed examination of motor and generator action. Emphasis is on different kinds of motors and generators.

GEO THERMAL POWER

University of California, University Extension,
2223 Fulton Street, Berkeley, CA 94720

Price: \$360.00/purchase Level: 9-12
\$ 25.00/rental

This film includes a tour of Northern California's geysers and underground sources of steam, which provide power for the San Francisco Bay Area. A steam drilling pioneer describes the history and operations of a geyser power station and discusses the future of geothermal power in the U.S.

GEYSERS & HOT SPRINGS

Barr Films, P. O. Box 5667, Pasadena, CA 91107

Price: \$145.00/purchase Level: 4-12

This film uses a combination of live action and animation. It explains hot springs activity: sources, different forms, and effects on the rock beneath the earth's crust.

GO FISSION

Walter J. Klein Co., Ltd., Carmel Rd., Box 17766,
Charlotte, NC 28211

Price: \$275.00/purchase Level: 6-12

This quarter-hour film assesses career opportunities in nuclear science and to nuclear facilities. It is suitable for use in science or vocational classes.

WITHDRAWN

GRAVITY & WHAT IT DOES

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase Level: 1-3

In this film, questions are answered in simple terms about the unseen force of gravity. For example, the question of why things fall down and not up is answered.

GRAVITY: HOW IT AFFECTS US

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$185.00/purchase Level: 1-9
\$ 12.00/rental

This film demonstrates how the force of gravity can do work, how it affects our daily lives, and how it affects space and other planets. This fourteen minute film is also available in Spanish.

GREAT SEARCH

Walt Disney Media Co., 500 So. Buena Vista Street,
Burbank, CA 91521

Price: \$225.00/purchase Level: 6-12

This film explains the current major sources of energy. It shows their discovery, development, and application.

GREEN PLANTS

McGraw-Hill Films, 1221 Avenue of the Americas,
New York, NY 10020

Price: \$130.00/purchase Level: 4-6
\$ 10.00/rental

Photography and animation present a comprehensive picture of the life of green plants. Cell division and photosynthesis are included.

GREEN PLANTS & SUNLIGHT

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$150.00/purchase Level: 4-6

This film illustrates how green plants capture the sun's rays and manufacture food. Also, man's reliance on this process, which cannot be duplicated in the laboratory, is illustrated.

GREEN POWER

Association Films, 866 Third Avenue, New York, NY 10022

Price: Free loan Level: 6-12

This is a story of forest conservation practices in Washington State. The film describes the accomplishments in the first twenty-five years of the 100-year forest management contract between a private timber company and the U.S. Forest Service.

16mm Films and Videocassettes

GROWING, GROWING

Churchill Films, 662 N. Robertson Blvd.,
Los Angeles, CA 90069

Price: \$155.00/purchase Level: K-3

This is a film of curious eyes, probing fingers, and growing green things. It includes classroom activities with plants: writing, reading, observation, experimentation, painting, singing, and even math.

HAVE OUR PLANET & EAT IT TOO?

Churchill Films, 662 N. Robertson Blvd.,
Los Angeles, CA 90069

Price: \$335.00/purchase Level: 7-12

This is a film about conflict between theories of land use: the old mining laws vs the New National Environmental Policy Act. A company that wishes to mine for phosphates in a National Forest is opposed by community forces.

HEAT & HOW WE USE IT

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$150.00/purchase Level: 1-3
\$ 12.00/rental

This film provides basic understanding about heat: its sources, the ways in which it travels, and its many uses. Also explained is how heat is reflected or absorbed by various materials.

HEAT & ITS BEHAVIOR

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase Level: 4-6

This short film deals with sources, measurement, and utilization of heat. It includes explanations of methods by which heat travels.

HEAT & TEMPERATURE

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$190.00/purchase Level: 6-9

This is a twelve-minute film which clarifies the definition of heat as energy transfer rather than a form of energy. Various types of heat output are measured.

16mm Films and Videocassettes

HEAT: ITS TRANSMISSION & CONTROL THROUGH INSULATION

Johns-Manville Sales Corporation, Drawer 17-L,
Denver, Colorado 80217

Price: Free loan Level: 9-12

This is an explanation of the problem of heat transfer. It offers solutions to heat transfer problems through use of insulation.

HEAT: LET'S TALK ABOUT IT

Aims Instructional Media Inc., 626 Justin Ave.,
Glendale, CA 91201

Price: \$200.00/purchase Level: 1-6

This film presents a series of basic concepts about heat and cold, with stop-projector, question-answer mode at significant intervals. Each segment can be used separately during a class period to reinforce student learning and participation.

HERE COMES THE SUN

Department of Energy Film Library, Technical Information
Center, P. O. Box 62, Oak Ridge, TN 37830

Price: Free loan Level: 7-12

In this film solar energy systems are shown on the roofs and on the ground working in four states. Collectors warm the air and water for swimming pools, dishwashers, and storage tanks.

HISTORY OF MODERN SCIENCE SERIES: A NEW REALITY

International Film Bureau Inc., 332 So. Michigan Avenue,
Chicago, IL 60604

Price: \$570.00/purchase Level: 9-12

This second part of the series traces the evolution of atomic theory, emphasizing the contributions of Niels Bohr. Bohr's work with energy quanta shook the principles of cause and effect that had been basic to the physical sciences.

HOMEMADE ELECTRICITY...WITH MR. WIZARD

Prism Productions Inc., P. O. Box 83, Canoga Park, CA 91305

Price: \$260.00/purchase Level: 7-12

This film investigates homemade electricity. It shows how electricity can be produced from everyday sources.

HOW A BOILING WATER REACTOR OPERATES

Glenville Film Center, 705 Corporations Park,
Scotia, CA 12302

Price: \$150.00/purchase Level: 7-12

This film explains how electricity can be produced from the atom. Animation is used to demonstrate the BWR and to explain safeguards and controls.

16mm Films and Videocassettes

HOW BIG IS AN ATOM?

Indiana University, Audio-Visual Center,
Bloomington, Indiana 47401

Price: \$9.50/rental

Level: 9-12

In this film Dr. Edward Teller reviews various determiners of the size of atoms. He discusses some of the ways in which the effects of atoms have been observed.

HOW DOES A CANDLE BURN?

Texture Films, Inc., 1600 Broadway, New York, NY 10019

Price: \$185.00/purchase

Level: 6-12

This is a description of combustion using a candle.

The film can be used as a background or supplement in physical science.

HOW GREEN PLANTS MAKE FOOD: PHOTOSYNTHESIS

Universal Education and Visual Arts, 100 Universal Plaza,
Universal City, CA 91608

Price: \$165.00

Level: 4-12

This film explains the process of photosynthesis. It emphasizes green plants as the primary source of the human food supply.

HOW GREEN PLANTS MAKE & USE FOOD

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase

Level: 9-12

This ten-minute film stresses the concept that all living things depend on food made by green plants. It shows what green plants require to grow.

HOW SAFE ARE AMERICA'S ATOMIC REACTORS?

University of California, University Extension,
2223 Fulton Street, Berkeley, CA 94720

Price: \$27.00/rental

Level: 9-12

This documents a British investigation of the health and environmental hazards of the light-water nuclear reactor program advocated by the U.S. Atomic Energy Commission.

The noted critic of nuclear power plants, John Gofman, concludes that this kind of reactor poses too many dangers to be used in England.

ICELAND: HOW CLEAR THE HOT SPRINGS BURBLE

International Film Bureau, Inc., 332 So. Michigan Ave.,
Chicago, IL 60604

Price: \$165.00/purchase Level: 9-12

This film explains the natural resources of thermal energy in Iceland. It points out the differences between thermal areas and describes how mineral water and thermal energy are used.

INTERTEL SERIES: FAREWELL ARABIA

Indiana University, Audio-Visual Center,
Bloomington, IN 47401

Price: \$14.00/rental Level: 9-12

This film reports the cultural changes which the acquisition of oil wealth is bringing to Abu Dhabi. Abu Dhabi is a small Arabian Sheikdom.

INTERTIE

U. S. Dept. of Energy, Bonneville Power Administration,
P. O. Box 3621, Portland, OR 97208

Price: free loan Level: 7-12

This film documents the construction of three high-capacity power transmission lines linking the Pacific Northwest and the Pacific Southwest. It is suitable for use in any science class.

INTRODUCING ATOMS AND NUCLEAR ENERGY

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00 Level: 7-9

This film introduces atomic structure and explains how energy is released from a nucleus. It defines basic terms and demonstrates uses of nuclear energy.

*Available on free loan from the DOE Film Library P. O. Box 62,
Oak Ridge, Tennessee 37830

INTRODUCTION TO ELECTRICITY

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$175.00/purchase Level: 6-9

This is an eleven-minute presentation of the fundamental concepts of electrical energy. It includes demonstrations and animations.

IONIZATION ENERGY

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$277.00/purchase Level: 9-12

This color/sound film runs twenty-two minutes. Photo-ionization and electron bombardment in measuring ionization energy are demonstrated.

16mm Films and Videocassettes

IRON: PRODUCT OF THE BLAST FURNACE

Academy Films, 748 Seward St., Hollywood, CA 90038

Price: \$150.00/purchase Level: 5-12

This eleven-minute film describes what happens to iron ore from the time it arrives at the blast furnace until it is converted into steel. The steel-making process represents a typical industrial energy consumption cycle.

KING ZOG AND THE ENERGY CRUNCH

Association Films, 866 Third Ave., New York, NY 10022

Price: free loan Level: 4-6

This is the story of King Zog and his imaginary kingdom. The emphasis is on energy conservation techniques.

LASER BEAM

Handel Film Corp., 8730 Sunset Blvd., W. Hollywood, CA 90069

Price: \$220.00/purchase Level: 10-12

This film explains the nature of the laser through animation. Also shown are some applications of lasers in medicine, industry, and space exploration.

LASERS UNLIMITED

Bell Telephone Co. (Contact nearest area office)

Price: free loan Level: 6-12

This eleven-minute color film is narrated by Barry Sullivan. It is a non-technical introduction to the laser, and its present and potential uses.

LEARNING ABOUT LIGHT

Paramount Communications, 5451 Marathon St.,
Hollywood, CA 90038

Price: \$165.00/purchase Level: 3-6

The sun, as the ultimate source of all our light, is presented as a beneficial force which can also hurt. Properties of light are shown through the use of a magnifying glass and prism; the color composition of light is demonstrated in a man-made rainbow.

LEARNING ABOUT SOLAR ENERGY

Paramount Communications, 5451 Marathon St.,
Hollywood, CA 90038

Price: \$210.00/purchase Level: 5-8

In this film children find ways to heat water for an outdoor shower. Experiments are shown to investigate whether white clothes or dark clothes are cooler in hot weather and a hamburger is cooked in a miniature solar furnace.

16mm Films and Videocassettes

LEARNING ABOUT WATER

Paramount Communications, 5451 Marathon St.,

Hollywood, CA 90038

Price: \$210.00/purchase

Level: 3-6

Children explore water and its various states of ice, steam, and its natural source in rain. The water cycle is explained and water is shown moving toys, running a grist mill, and generating electricity in a giant dam.

LET'S HELP RECYCLE

Paramount Communications, 5451 Marathon St.,

Hollywood, CA 90038

Price: \$190.00/purchase

Level: 3-6

What children can do about recycling waste is shown in this film. A group appears before their city council to present a report on their own recycling efforts.

LIFE FROM THE SUN

International Film Bureau, Inc., 332 S. Michigan Ave.,

Chicago, IL 60604

Price: \$165.00/purchase

Level: 9-12

This film offers a panoramic view of the sun's influences on life. It enumerates the physical and biological phenomena that are the direct result of the sun's energy.

LIGHT ALL ABOUT US (2nd edition)

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$150.00/purchase

Level: 4-6

This ten-minute film explores sources of light energy and light behavior. It includes demonstrations and light experiments.

LIGHTNING

Glenville Film Ctr., Corporations Park Bldg. 705,

Scotia, NY 12302

Price: \$175.00/purchase

Level: 7-12

This film describes the character of lightning and how it affects each of us to some degree. Animated sequences graphically illustrate the peculiar behavior patterns of electrical discharges.

16mm Films and Videocassettes

LITTLE BLUEBIRD'S VALLEY

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase

Level: K-3

This ten-minute animated cartoon introduces conservation concepts. Humans come to a peaceful valley to build a dam.

LIVING WITH THE ATOM

Moody Institute of Science, 12000 E. Washington Blvd.,
Whittier, CA 90606

Price: \$320.00/purchase

Level: 6-12

This film provides a clear definition of atomic energy and traces the atomic age from the first nuclear explosion in New Mexico through the development of the hydrogen bomb. Man's moral dilemma in guiding the great power of the atom into constructive channels is emphasized.

LIVING WITH ENERGY

Modern Talking Picture Service: available only in the following states: MI, IN, WI, IL, MN, IA, MO, ND, SD, KA, NB, OK, MT, WY, CO. (Contact MTPS office in nearest major city.)

Price: free loan

Level: 7-12

This is a twenty-minute color/sound film. It documents energy sources, types, uses, and conservation measures.

LNG--IT'S ON ITS WAY

Modern Talking Picture Service, 2323 New Hyde Park Rd.,
New Hyde Park, NY 11040

Price: free loan

Level: 8-12

Natural gas from Algeria has become another energy alternative for America. This film reveals the processes involved in shipping liquified natural gas safely.

LOVEJOY'S NUCLEAR WAR

Green Mountain Post Films, P. O. Box 177,
Montague, MA 01351

Price: \$625.00/purchase

Level: 11-12

(contact source for rental price)

This film documents Samuel Lovejoy's personal battle against the construction of a nuclear power plant, which involved a felony trial and subsequent acquittal for Lovejoy. It is a provocative insight into the man and the nuclear power controversy.

16mm Films and Videocassettes

MAGNETIC FIELDS & ELECTRIC CURRENTS - PARTS 1 & 2

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$15.00/three-day loan (each part) Level: 4-12

Part I explores the magnetic properties associated with a wire carrying a direct electric current. Part II investigates what happens when magnetic fields interact.

MAGNETISM AT WORK

Glenville Film Center, 705 Corporations Park,
Scotia, NY 12302

Price: \$150.00/purchase Level: 7-12

Beginning with a brief history of magnets, this film proceeds through compasses, magnetic fields, and electromagnets. Modern applications of magnetism are included.

MAGNETS FOR BEGINNERS

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$165.00/purchase Level: K-3

This eleven-minute film includes simple experiments with magnets. It shows a magnetic field in three dimensions.

MAKE A WISH SERIES: CHAIN

MacMillan Films, 34 MacQuesten Parkway South,
Mount Vernon, NY 10550

Price: \$99.00/purchase Level: 1-6
\$15.00/rental

"Chain" is one film of a 32-film series. It introduces basic concepts of nuclear power generation on an elementary level and runs twelve minutes.

MAKING THINGS MOVE

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$150.00/purchase Level: 1-3
\$12.00/rental

This film shows examples of forces that make things move and forces that stop movement. It is available in Spanish.

MALI: THE DESERT & THE RIVER (AFRICAN SERIES)

MacMillan Films, Inc., 34 MacQuesten Parkway South,
Mount Vernon, NY 10550

Price: \$85.00/purchase Level: 7-9

This black-and-white film shows how the Niger River is crucial to farming, fishing, and trading activities of the West African nation of Mali. Rapid development in Africa depends on the efficient use of the river's power and other resources.

16mm Films and Videocassettes

MAN BUILDS - MAN DESTROYS

New York State Department of Education and UN Television,
Great Plains Instructional TV Library, Box 80669,
Lincoln, NE 68501

Price: \$20.00/rental per film

Level: 7-12

"Man Builds - Man Destroys" is a thirty-minute film series that studies man and his earthly co-inhabitants. Man destroys the environment - but he also has the ability to restore.

MAN & HIS WORLD SERIES

Films Incorporated, 733 Green Bay Road,
Wilmette, IL 60091

Price: \$165.00 - \$250.00/purchase

Level: 7-12

\$ 20.00/rental (discount on purchase of series)

This is an all-color film series that provides an experiential basis for the study of cultures and people around the world. Most films are case studies of one family or group within the context of a particular environment.

MAN IN HIS ENVIRONMENT

University of California, University Extension,
2223 Fulton Street, Berkeley, CA 94720

Price: \$350.00/purchase (film)

Level: 9-12

\$230.00/purchase (videocassette)

\$ 25.00/rental

This filmed essay is on the checks and balances of the natural cycle, showing how the processes that regulate other forms of life ultimately regulate humanity as well. It explores the wastefulness of our industrial society and warns of dangers inherent in many of our practices.

MATTER & ENERGY

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$190.00/purchase

Level: 7-12

"Matter & Energy" shows the universe as a system of matter and energy. It examines properties and states of matter, including modern atomic theory, and runs twelve minutes.

MATTER & ITS PHYSICAL CONDITION

MacMillan Films, Inc., 34 MacQuesten Parkway South,
Mount Vernon, NY 10550

Price: \$195.00/purchase

Level: 7-12

This film includes a series of graphic experiments, using microphotography and live action to show the various conditions of matter. The predominant state of matter, plasma, is described and illustrated.

16mm Films and Videocassettes

MEANING OF THE INDUSTRIAL REVOLUTION

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase Level: 7-12

This ten-minute film explains the importance of machines and steam power in early industrialization. It emphasizes early industrial achievements.

MOUSE-ACTIVATED CANDLE LIGHTER...WITH MR. WIZARD

Prism Productions Inc., P. O. Box 83,

Canoga Park, CA 91305

Price: \$100.00/purchase Level: 4-9

This film illustrates various forms of potential and kinetic energy. Students are challenged to find examples of energy hidden in mechanisms and their movements.

MY NUCLEAR NEIGHBORS

Walter J. Klein Co., Ltd., 6301 Carmel Rd., Box 17766,

Charlotte, NC 28211

Price: \$275.00/purchase Level: 6-12

This fifteen-minute film describes the integration of nuclear generating stations into communities. It is suitable for use in science, social studies, or ecology classes.

NATURAL GAS: ENERGY GOING TO MARKET

American Gas Association, 1515 Wilson Blvd.,

Arlington, VA 22209

Price: \$65.00/purchase Level: 6-12

This ten-minute, color/sound film tells the story of transporting natural gas through the thousands of miles of pipeline and how it is stored during times of low demand.

NATURAL GAS: FLOWING ENERGY

American Gas Association, 1515 Wilson Blvd.,

Arlington, VA 22209

Price: \$100.00/purchase Level: 6-12

This ten-minute, color/sound film illustrates the application of scientific principles in controlling the flow of natural gas. Animation demonstrates a gas meter, compressor, and regulator.

16mm Films and Videocassettes

NATURAL GAS: SUPPLY AND DEMAND

American Gas Association, 1515 Wilson Blvd.,

Arlington, VA 22209

Price: free loan

Level: 6-12

This film illustrates the current supply dilemma facing the natural gas industry. It runs twenty-eight minutes and is in color with sound.

NEWTON: THE MIND THAT FOUND THE FUTURE

Learning Corporation of America, 1350 Avenue of the Americas,
New York, NY 10019

Price: \$380.00/purchase

Level: 7-12

Rarely does history encounter so talented a thinker as Newton. This film explains Newton in his own time and dramatizes his link to the modern science of physics--energy, matter, and motion.

NO DEPOSIT--NO RETURN

Perennial Education, Inc., 477 Roger Williams,

P. O. Box 855 Ravinia, Highland Park, IL 60035

Price: \$350.00/purchase

Level: 9-12

\$ 35.00/rental

"No Deposit--No Return" is a twenty-eight-minute color film. Humorous vignettes illustrate how easy it is to blame someone else for energy waste and environmental pollution.

NOW THAT THE DINOSAURS ARE GONE

Atomic Industrial Forum, 7101 Wisconsin Ave.,
Washington,

Price: \$250.00/purchase

Level: 7-12

free 2-week loan

This twenty-six-minute color film presents the story of nuclear energy as the next step in man's use of resources. In non-technical language, it answers basic questions often asked about nuclear energy.

NUCLEAR DILEMMA

Time-Life Multi-Media, Time-Life Bldg., New York, NY 10020

Price: \$450.00/purchase (film)

Level: 6-12

\$225.00/purchase (videotape)

\$ 45.00/rental

Nuclear fission reactors may provide the only answer to an electricity demand that doubles every decade. The promises and the perils are examined in this film.

16mm Films and Videotapes

NUCLEAR POWER & THE PERRY ENVIRONMENT

NUS Corporation, 4 Research Place, Rockville, MD 20850
Price: free 14-day loan Level: 7-12
This film is a documentary of environmental issues regarding nuclear plants. The emphasis is on nuclear plant siting.

NUCLEAR POWER: QUESTIONS & ANSWERS...WITH MR. WIZARD

Prism Prod., Inc., P. O. Box 83, Canoga Park, CA 91305
Price: \$310.00/purchase Level: 7-12
This film deals with the questions asked by the public about nuclear energy. It covers common issues regarding the safety of generating electricity with nuclear power.

THE NUCLEUS & ITS PARTS

Richard Cline Film Prod., 329 S. Williams,
Englewood, CO 80110
Price: \$246.00/purchase Level: 10-12
\$ 12.75/rental
This film focuses attention on atomic nuclei. Transformation, anti-matter, fission, fusion, and cosmic ray informational concepts are included and related to nuclear structure.

NUCLEAR POWER IN THE UNITED STATES

Dept. of Energy Film Library, Technical Information Center,
P. O. Box 62, Oak Ridge, TN 37830
Price: free loan Level: 7-12
This film describes the entire spectrum of the nuclear power industry. It includes advanced reactor concepts.

OFFSHORE

National Film Board of Canada, 16th Floor,
1251 Avenue of the Americas, New York, NY 10020
Price: \$265.00/purchase Level: 9-12
\$ 30.00/rental
An around-the-clock shift on an oil drilling rig is featured as the search for oil moves seaward. "Offshore" offers insight into the toil, involvement, and excitement of the people in the forefront of the search.

16mm Films and Videocassettes

OFFSHORE: THE SEARCH FOR OIL & GAS

Modern Talking Picture Service, Inc., 2323 New Hyde Park Rd.,
New Hyde Park, NY 11040

Price: free loan

Level: 7-12

Before the end of this century, more than half of the world's petroleum supply will have to come from the oceans. This film tells of the intensive search and the painstaking effort to preserve the ocean environment.

OIL IN LIBYA

Films, Inc., 733 Green Bay Rd., Willmette, IL 60091

Price: \$215.00/purchase

Level: 7-12

\$ 20.00/rental

This color film documents how oil has changed Libya. New prosperity has created new problems, especially in urban areas.

OIL! SPOIL! PATTERNS IN POLLUTION

Association Films, 866 Third Ave., New York, NY 10022

Price: \$275.00/purchase

Level: 6-12

\$ 7.50/rental

This seventeen-minute color film was made by the Sierra Club. It discusses pollution as it relates to our energy problems.

OIL TODAY--POWER TOMORROW

Frith Films, P. O. Box 424, Carmel-Valley, CA 93924

Price: \$150.00/purchase

Level: 4-9

This film documents how oil is brought to the surface. It describes the variety of oil products and the methods of transportation, as well as the importance of oil workers and the significance of oil as a source of energy.

OIL WELL

University of Southern California, Film Distribution Center,
Division of Cinema, University Park, Los Angeles, CA 90007

Price: \$143.00/purchase

Level: 9-12

\$ 12.00/rental (6-day)

"Oil Well" is a satire on man's self-destructive urge. It focuses on oil wells, pollution, mechanization, and self-interest.

OUR FRIEND THE ATOM

Walt Disney Media Co., 500 S. Buena Vista St.,
Burbank, CA 91521

Price: \$535.00/purchase

Level: 6-12

This film tells the story of man's efforts to solve the mysteries of the atom. It is animated and provides an entertaining introduction to the study of atomic structure.

OUR MOUNTAINS OF TRASH SERIES: RECLAIMING OUR WASTES

Time-Life Multimedia, Time-Life Bldg., New York, NY 10020

Price: \$70.00/purchase

Level: 9-12

This film examines innovative techniques of putting solid wastes to good use. These include dissolvable packaging, sanitary landfills, making "glasphalt" from old bottles, and metal pellets from junked cars.

PARTICLES OF MATTER

Universal Education and Visual Arts, 100 Universal City Plaza,
Universal City, CA 91608

Price: \$165.00/purchase

Level: 7-12

In this film, different forms of matter, matter characteristics, and the matter-energy relationship are used to illustrate how matter is structured. Knowledge of atomic structure will help in understanding the importance of the work of scientists in this field and the many problems raised by the release of nuclear energy.

PERPETUAL MOTION

BFA Educational Media, P. O. Box 1795, Santa Monica, CA 90406

Price: \$15.00/rental (3 days)

Level: 4-12

Is it possible to make a machine that will run forever? Students are led to the generalization that energy must be continually added to any system.

PHOTOSYNTHESIS: CHEMISTRY OF FOOD MAKING

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$205.00/purchase

Level: 7-12

This thirteen-minute film thoroughly investigates fundamental processes of photosynthesis. Experiments show how glucose and oxygen result from photosynthesis.

16mm Films and Videocassettes

PITHOLE, U.S.A.

United States Steel Corporation, 600 Grant Street,
Pittsburgh, PA 15230

Price: Free loan

Level: 7-12

This is a 16mm black and white film documentary on Pithole City, Pennsylvania. This city is the first oil industry boomtown.

PLANT LIFE AT WORK

Moody Institute of Science, 12000 E. Washington Blvd.,
Whittier, CA 90606

Price: \$190.00/purchase

Level: 6-12

In "Plant Life at Work," the processes of plant life are speeded up by time-lapse photography. This reveals the impressive energy of plants as they move, grow, reproduce and manufacture food through photosynthesis.

PLASMA: THE FOURTH STATE OF MATTER

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$15.00/three-day loan

Level: 4-12

The stars, the earth's ionosphere, even the matter in a glowing neon sign are examples of plasma, the fourth state of matter. The plasma state results when the amount of energy is great enough to cause the atoms themselves to break down.

POLLUTION IN PERSPECTIVE: OUR AIR & WATER

Glenville Film Center, 705 Corporations Park,
Scotia, NY 12302

Price: \$175.00/purchase

Level: 10-12

This film analyzes the quality of our air and water. The question of how a consuming society and technology should react to the problems of growing pollution and waste is confronted.

POWER FROM PARADISE

Tennessee Valley Authority, Chattanooga, TN 37401

Price: Contact TVA

Level: 7-12

"Power from Paradise" is a thirty-two-minute sound and color film. It documents the construction of a coal burning steam plant.

16mm Films and Videocassettes

POWER FROM THE EARTH

Department of Energy Film Library, Technical Information Ctr.,
P. O. Box 62, Oak Ridge, TN 37830

Price: Free loan Level: 7-12

We need new sources of electrical power. In this film, scientists, engineers, and managers explain the various problems of obtaining thermal energy from the earth.

POWER WITHOUT END

Xerox Education Publications, 245 Long Hill Road,
Middletown, CT 06457

Price: \$270/purchase Level: 9-12

This film takes a look at energy sources that cannot be exhausted, such as the sun, wind, tides, the earth's internal heat, and flowing water. It shows what science is already doing to harness these sources.

POWERLINE: TRANSPORTATION OF ENERGY

Barr Films, P. O. Box 5667, Pasadena, CA 91107

Price: \$145.00/purchase Level: 4-12

This film documents the production and distribution of energy. It focuses on the natural resources, skilled workers, and special tools needed to build and operate a power supply system.

PROBLEMS OF CONSERVATION: OUR NATURAL RESOURCES

Encyclopedia Britannica Education Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$150.00/purchase Level: 7-12
\$ 12.00/rental

This film, a broad overview of the developing crisis in natural resources, establishes man's reliance on natural resources, his misuse of them, and current efforts in conservation. Visuals and narration tell a hard-hitting story--man must control population growth and pollution to keep the earth habitable.

PRELUDE TO POWER

International Film Bureau, Inc., 332 So. Michigan Ave.,
Chicago, IL 60604

Price: \$165.00/purchase Level: 9-12
\$ 12.00/rental

"Prelude to Power" presents Faraday's work in the field of electromagnetism. The experiments that led to an understanding of the induction ring are described in detail, and the importance of this discovery for the development of dynamos is illustrated.

16mm Films and Videocassettes

PRIMARY GEOGRAPHY SERIES: CONSERVATION

Gateway Products, Inc., University of Arizona,
Bureau of Audio-Visual Services, Tucson, AZ 85721
Price: \$120.00/purchase Level: K-3
*Saving the earth so others can enjoy it later and wisely
protecting the natural resources is the responsibility of
everyone. Both man and nature can be wasteful and
destructive, but man can exert a healing force on forests,
wildlife, land, water, and air.*

PRINCIPLES OF ELECTRICITY

Glenville Film Center, 705 Corporations Park,
Scotia, NY 12302
Price: 7-12 Level: 7-12
*This film covers experiments with electricity, electrical
charges, current flow, magnetism, and motor action. The
lesson is reinforced by visuals, step explanations, and
a summary.*

PROJECTION - 70's: FOOD PRODUCTION

American Education Films, 132 Lasky Drive,
Beverly Hills, CA 90212
Price: \$300.00/purchase Level: 10-12
\$ 35.00/rental
*This film presents many of the problems and advances of
farming within the last decade. It also discusses the
future of farming and agricultural production.*

PSSC PHYSICS FILM SERIES, PART I: CONSERVATION OF ENERGY

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603
Price: \$189.00/purchase Level: 9-12
*In this film, energy is traced from coal to electrical
output in a power plant where quantitative data are taken.
It demonstrates essential conservation measures.*

PSSC PHYSICS FILM SERIES, PART II: COULOMB'S LAW

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603
Price: \$189.00/purchase Level: 9-12
*This film explains the inverse square variation of electric
force with distance. It demonstrates various electrical
effects inside a charged hollow sphere.*

16mm Films and Videocassettes

PSSC PHYSICS FILM SERIES, PART III: EMF

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$151.00/purchase Level: 9-12

This film demonstrates energy transfer principles. The concept of EMF is extended to describe any device which transforms energy by separating elementary charges.

PSSC PHYSICS FILM SERIES, PART IV: ELECTRICAL POTENTIAL DIFFERENCE, PARTS I & II

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$189.00/purchase (both parts) Level: 9-12

In Part I of this film the mechanism by which a battery establishes an electric field in a circuit is analyzed and the potential energy stored in such a system is measured experimentally and explained theoretically.

Part II shows how the energy transformations in a steady current-carrying circuit can be obtained from measurements of potential difference and electric current, including the energy dissipated internally in the batteries used.

PSSC PHYSICS FILM SERIES, PART V: ELECTROMAGNETIC WAVES

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$189.00/purchase Level: 9-12

This film describes the theory of the electromagnetic radiation spectrum. An experiment shows how radiation occurs from accelerated charges.

PSSC PHYSICS FILM SERIES, PART VI: ELECTRONS IN A UNIFORM MAGNETIC FIELD

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$76.00/purchase Level: 9-12

This film shows electron path in a magnetic field measured by a spherical cathode ray tube with a low gas atmosphere. Necessary computational arithmetic is included.

16mm Films and Videocassettes

PSSC PHYSICS FILM SERIES, PART VII: FORCES

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$151.00

Level: 9-12

This is an introduction to mechanics in general and it provides background for later study of forces. Qualitative experimentation shows gravitational forces and compares this type of force with electrical force.

PSSC PHYSICS FILM SERIES, PART VIII: FRANK-HERTZ EXPERIMENT

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$189.00

Level: 9-12

With electrons accelerated through mercury vapor, their kinetic energy is shown transferred to mercury atoms. This establishes the association of energy quantum with a line in the energy spectrum.

PUTTING THE SUN TO WORK

Department of Energy Film Library, Technical Information Ctr.
P. O. Box 62, Oak Ridge, TN 37830

Price: free loan

Level: 7-12

Three leading solar experts explain the current schemes for harnessing solar power. Emphasis is on home and industrial usage.

RADIANT ENERGY AND THE ELECTROMAGNETIC SPECTRUM

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$250.00/purchase

Level: 7-12

This sixteen-minute film reenacts the experiment which uncovered the various forms of radiant energy. It describes sources and uses of various radiant energy waves.

REFRIGERATION AND AIR CONDITIONING

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$150.00/purchase

Level: 7-12

This is a ten-minute film which illustrates the concept that evaporation is a cooling process. It shows methods of heat absorption and describes convection currents.

16mm Films and Videocassettes

RIVER OF POWER (1968)

Journal Films, Inc., 930 Pitner Ave.,
Evanston, IL 60202

Price: \$265.00/purchase

Level: 7-12

This film traces the growth of the oil industry from the initial discovery in 1858 through today. It examines the impact this source of energy has had on our country.

THE SAN DIEGO EXPERIENCE

Modern Talking Picture Service, Inc.,
2323 New Hyde Park Road, New Hyde Park, NY 11040

Price: free loan

Level: 7-12

This film shows the overwhelming response of San Diego's residents to Alcoa's aluminum can reclamation and recycling program. Features are candid interviews with participants.

SAVING ENERGY AT HOME

Ramsgate Films, 704 Santa Monica Blvd.,
Santa Monica, CA 90401

Price: \$180.00/purchase

Level: 6-12

This film pinpoints major sources of energy waste around the house. It provides specific tips on how to cut down on home energy consumption and fuel bills.

SCARS ON THE SURFACE

Great Plains Instructional TV Library, Box 80669,
Lincoln, NEB 68501

Price: \$20.00/rental

Level: 1-2

This film reports on new methods of mined land restoration. Techniques such as land rehabilitation and reduction of extravagant and trivial uses of resources are covered.

SCIENCE IS DISCOVERY

Great Plains Instructional TV Library, Box 80669,
Lincoln, NEB 68501

Price: \$25.00/rental (per lesson)

Level: 2-4

"Science is Discovery" is a series of films that can be used individually or together. Topics included are the sun, electric current flow, the universe, the properties of matter, living organisms, and forces that shape the earth.

16mm Films and Videocassettes

SCIENCE IS SEARCHING (A Series about Energy)

Great Plains Instructional TV Library, Box 80669,
Lincoln, NEB 68501

Price: \$25.00/rental

Level: 1-2

This series shows how different forms of energy can be used to set an object in motion or to alter its motion. It is a simple introduction to concepts of energy usage.

SCIENCE ROOM (A Series)

Great Plains Instructional TV Library, Box 80669,
Lincoln, NEB 68501

Price: \$25.00/rental

Level: 5-6

"Science Room" is a thirty-two-film series showing experiments and items that are not available in an ordinary classroom situation. Demonstrations of atomic energy, a look at the versatile laser light, and lectures by weather forecasters are included.

SCIENCELAND SERIES: HOW DOES HEAT HELP YOU? WHAT LIGHTS UP THE DARKNESS? HOW STRONG IS THE WIND?

Great Plains Instructional TV Library, Box 80669,
Lincoln, NEB 68501

Price: \$25.00/rental (per film)

Level: 1-2

This series centers on heat, light, and wind. It is a simple introduction to the practical uses of these energy forms.

SEAMLESS WEB

Great Plains Instructional TV Library, Box 80669,
Lincoln, NEB 68501

Price: \$20.00/rental

Level: 7-12

All of our energy comes from the sun and before it becomes useful to man it has usually gone through a long chain of plant and animal life. This film explores the unforeseen effects of disrupting this chain by tampering with the environment.

16mm Films and Videocassettes

SEARCH FOR NEW ENERGY

Counselor Films, Inc., 2100 Locust St.,
Philadelphia, PA 10103

Price: \$50.00/rental per week

\$470.00/purchase

Level: 7-12

This film is concerned with the fuel sources of now and the future. It explores the ramifications and sociological impact of the new sources of energy such as nuclear and solar power.

SEARCH FOR SCIENCE, UNIT V: ELECTRICITY

Great Plains Instructional TV Library, Box 80669,
Lincoln, NEB 68501

Price: \$25.00/rental per film

Level: 4

This is a series of six films that can be used individually or together. Topics included are mechanical electricity, chemical electricity, conductors and non-conductors, series and parallel circuits, and magnetism.

SEARCH INTO WHITE SPACE

National Film Board of Canada, 16th Floor,
1251 Avenue of the Americas, New York, NY 10020

Price: \$205.00/purchase

\$ 20.00/rental

Level: 9-12

There may be an ocean of oil under the trackless desert of the Arctic, but pinpointing a drilling location involves all the resources of industrial technology. "Search Into White Space" is an account of this gamble as it takes place inside the Arctic Circle.

SIX SOURCES OF ELECTRICITY...WITH MR. WIZARD

Prism Productions, Inc., P. O. Box 83,
Canoga Park, CA 91305

Price: \$160.00/purchase

Level: 4-9

In this film six sources of electricity are hidden. Students track down the sources and learn how they generate a current.

16mm Films and Videocassettes

SNAKE RIVER

Northern Films, Box 98, Seattle, WA 98111

Price: \$330.00/purchase

Level: 6-12

"Snake River" outlines the nature of the area traversed by the Snake River, with special attention to the Hell's Canyon area. The film tells of the successful effort to have the area made a permanent natural recreation area.

SOLAR COOKERS: SOMETHING NEW UNDER THE SUN

University of California, University Extension,

2223 Fulton Street, Berkeley, CA 94720

Price: \$19.00/rental

Level: 9-12

This film is a study of the use of solar energy devices in rural regions. It shows collaboration between engineers and anthropologists to adapt technology to the needs of underdeveloped areas.

SOLAR ENERGY: TO CAPTURE THE POWER OF SUN & TIDE

Paramount Communications, 5451 Marathon Street,

Hollywood, CA 90038

Price: \$330.00/purchase

Level: 6-12

This film shows how solar energy is gathered for experimental purposes by a sun furnace in the Pyrenees. On a smaller, practical scale, a man has built a house in which rain water is heated by solar energy.

SOLAR RADIATION, PARTS 1 & 2

Ward's Natural Resources Establishment, Inc.,

P. O. Box 1712, Rochester, NY 14603

Price: \$198.00/purchase (Part 1)

Level: 9-12

\$220.00/purchase (Part 2)

This is a two-part, color-sound film. It illustrates the concept that energy radiated by earth must balance energy received from the sun.

SPIN! TOOT! SCOOT! FORMS OF ENERGY USED IN TOYS

Martin Moyer Productions, 900 Federal Ave.,

Seattle, WA 98102

Price: \$195.00/purchase

Level: 1-5

This film is a new approach to the study of energy. It focuses on how various forms of energy make toys move.

16mm Films and Videocassettes

STORY OF HEAT

Universal Education and Visual Arts, 100 Universal City Plaza,
Universal City, CA 91608

Price: \$165.00/purchase Level: 4-9

This film introduces the study of the basic sources and properties of heat and the harnessing of heat energy to serve man. It also illustrates how heat is produced in an atomic power plant and a nuclear submarine.

STRIP MINE TRIP

Churchill Films, 662 N. Robertson Blvd.,
Los Angeles, CA 90069

Price: \$155.00/purchase Level: 7-12

This unique film involves a helicopter ride across Kentucky land devastated by strip mining. The sound track is a mix of justifications by mine operators and criticism by indignant citizens.

STRUGGLE FOR POWER

Modern Talking Picture Service, Inc., Caterpillar Film Library,
1687 Elmhurst Road, Elk Grove Village, IL 60007

Price: free loan Level: 7-12

This film documents what is being done to supplement dwindling fossil fuel supplies. It covers shale oil extraction and coal gasification processes.

THE SUN & HOW IT AFFECTS US

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$160.00/purchase Level: 4-9

This ten-minute film provides a simple but comprehensive study of the sun's effect on earth. It demonstrates the effects of the sun's corona.

SUN: FRIEND OR FOE?

Aims Instructional Media, Inc., 626 Justin Ave.,
Glendale, CA 91201

Price: \$155.00/purchase Level: 1-9

The sun and basic concepts about it are presented in an up-to-date treatment with emphasis upon the positive and negative aspects of the sun's influence upon life on our earth. This film is also available in Spanish.

16mm Films and Videocassettes

THE SUN: ITS POWER & PROMISE

Encyclopedia Britannica Education Corporation,

425 N. Michigan Ave., Chicago, IL 60611

Price: \$320.00/purchase

Level: 7-12

\$ 17.00/rental

Animation and photography combine to explore ways in which the sun's energy might be better used to help replace our dwindling supplies of fossil fuels. This film is in color and runs twenty-four minutes.

SUNBEAM SOLUTION

Time-Life Multimedia, Time-Life Building,

New York, NY 10020

Price: \$425.00/purchase (film)

Level: 9-12

\$215.00/purchase (videocassette)

"Sunbeam Solution" examines the non-nuclear sources of power which remain untapped. Some of these sources are the sun, wind, tidal power, and geothermal energy.

SUNLIGHT: A FIRST FILM

BFA Educational Media, P. O. Box 1795,

Santa Monica, CA 90406

Price: \$15.00/rental (3-day)

Level: K-6

We live in a sunlit world where every day the sun brings light and life to the earth. As this film shows, all life on earth depends on sunlight.

SUPERHIGHWAYS FOR POWER

Tennessee Valley Authority, Chattanooga, TN 37401

Price: Contact TVA

Level: 7-12

"Superhighways for Power" is a twenty-five minute film with sound and color. It documents the construction of an EHV transmission line in western Tennessee.

THE SWIMMING HOLE

BFA Educational Media, P. O. Box 1795,

Santa Monica, CA 90406

Price: \$15.00/rental (3-day)

Level: 4-12

A modern-day farm boy dams a stream to create a swimming hole. In the film the boy must face the choice of maintaining his swimming hole or returning the stream to its natural state.

16mm Films and Videocassettes

SWITCH ON THE SUN

Xerox Education Publications, 245 Long Hill Road,
Middletown, CT 06457

Price: \$255.00/purchase

Level: 9-12

The earth is running out of fossil fuels. This film examines how solar energy already is being used throughout the world to heat homes and manufacturing plants.

TENNESSEE RIVER: CONSERVATION & POWER

BFA Educational Media, P. O. Box 1795,
Santa Monica, CA 90406

Price: \$15.00/three-day loan

Level: 4-12

In the Tennessee Valley, a program has proved that man can alter his environment to his advantage and correct past ecological mistakes. The TVA has carried out programs for flood control, power production, and for development of recreational areas.

THERE MUST BE A BETTER WAY

Modern Talking Picture Service, Inc., 2323 New Hyde Park Road,
New Hyde Park, NY 11040

Price: Free loan

Level: 9-12

Los Angeles commuters have discovered an innovation in urban transportation. They have created a custom-routed bus system that provides them with a better way of getting to work and home each day.

A THOUSAND SUNS

Barr Films, P. O. Box 5667, Pasadena, CA 91107

Price: \$150.00/purchase

Level: 6-12

"A Thousand Suns" shows how we have used our present energy capabilities to create luxuries never dreamed possible. It also shows how we have created a throw-away society where virtually nothing of value endures.

TIDAL POWER

Department of Army, New England Division, Corps of Engineers,
424 Trapelo Road, Waltham, MA 02154

Price: Free loan

Level: 7-12

This film documents a study made by the U.S. and Canada on the economic feasibility of harnessing tidal power for electrical energy. It includes a tour of project sites.

16mm Films and Videocassettes

TOAST

Earth Chronicles, Documentary Production, 811 N. W. 20th,
Portland, OR 97209

Price: \$180.00/purchase Level: 4-12

"Toast" is a series of images that takes the audience from an oil well head to fertilizer and from fields of grain to toast. It documents the energy use cycle and includes a study guide.

TO BOTTLE THE SUN

Department of Energy Film Library, Technical Information Ctr.,
P. O. Box 62, Oak Ridge, TN 37830

Price: free loan Level: 7-12

The fusing of atoms releases large amounts of energy. In this short film two scientists explain the fusion process in the attempt to generate electricity.

TO CAPTURE THE POWER OF SUN & TIDE: UNLIMITED ENERGY... NO POLLUTION

University of California, University Extension,
2223 Fulton St., Berkley, CA 94720

Price: \$28.00/rental Level: 9-12

This film examines the prospects of future utilization of tidal and solar energy. It shows presently operating solar and tidal installations overseas.

TO FILL A NEED

Sacramento Municipal Utility District, P. O. Box 15830,
Sacramento, CA 95813

Price: free loan Level: 7-12

This film shows a nuclear facility of the Sacramento Municipal Utility District. It documents the conception and growth of this facility.

TREASURES OF THE EARTH

Churchill Films, 662 N. Robertson Blvd.,
Los Angeles, CA 90069

Price: \$200.00/purchase Level: K-9

"Treasures of the Earth" describes forces on the earth's crust which result in deformations allowing concentration of minerals by various kinds of water action. It describes coal formation and the accumulation of oil.

16mm Films and Videocassettes

TURNING ON ENERGY

American Gas Association, 1515 Wilson Blvd.,
Arlington, VA 22209

Price: \$25.00/rental

Level: 1-3

This animated film is for the elementary grades and introduces the natural gas industry. Gas comes to us because someone has found, transported, and delivered it ready to be used.

TVA & THE NATION

Tennessee Valley Authority, Chattanooga, TN 37401

Price: contact TVA

Level: 7-12

This is a twenty-minute sound/color film. It describes TVA's resource development program.

TWO FOR TOMORROW: HEAT

Great Plains Instructional TV Library, Box 80669,
Lincoln, NB 68501

Price: \$25.00/rental

Level: K-2

This film deals with the effects of heat. A series of simple experiments reveals the ability of heat to rise and to cause expansion in solids.

THE ULTIMATE ENERGY

Dept. of Energy Film Library, Technical Information Ctr.,
P. O. Box 62, Oak Ridge, TN 37830

Price: free loan

Level: 7-12

"The Ultimate Energy," a film on the search for fusion power, visits five major fusion research laboratories. Our quest to harness fusion power has eluded scientists since 1950.

UNDERSTANDING MATTER & ENERGY

International Film Bureau, Inc., 332 S. Michigan Ave.,
Chicago, IL 60604

Price: \$165.00/purchase

Level: 9-12

This film provides a simple explanation of the three forms of matter: liquid, solid, and gas. It also illustrates different forms of energy.

UNSEEN JOURNEY

Association Films, 866 Third Ave., New York, NY 10022

Price: free loan

Level: 6-12

This twenty-minute color film describes methods of transporting oil to the refinery. Each method is a tribute to science, ingenuity, and determination.

16mm Films and Videocassettes

UP THE POWER CURVE

Dept. of Energy Film Library, Tech. Information Ctr.,

P. O. Box 62, Oak Ridge, TN 37830

Price: free loan

Level: 7-12

This film shows the practicality of energy conservation. It covers a wide range of energy saving ideas and the dollar savings to be achieved from each.

USE IT, USE IT UP

University of California, University Extension,

2223 Fulton St., Berkley, CA 94702

Price: \$320.00/purchase (film)

Level: 9-12

\$210.00/purchase (videotape)

\$ 23.00/rental

This film traces the sources of products that are briefly used and then become waste. It illustrates normal biological processes involved in nature's re-cycling and re-use of material.

UTILIZING FRESH WATER RESOURCES: THE COLUMBIA RIVER

N. W. Film Prod., P. O. Box 1030, Spokane, WA 99210

Price: \$210.00/purchase

Level: 4-12

This film traces the Columbia River from its source. Multiple uses of the river are shown including the generation of hydroelectric power.

WASTE NOT

Great Plains Instructional TV Library, Box 60669,

Lincoln, NB 68501

Price: \$20.00/rental

Industrial nations have devoured energy in competition and encouraged developing nations to do the same. This film makes the point that energy is now a crucial resource.

WATER

Modern Talking Picture Service, Inc., 2323 New Hyde Park Rd.,

New Hyde Park, NY 11040

Price: free loan

Level: 9-12

This film explores both the aesthetic and practical use of water. It covers the hydroelectric cycle, water chemistry, pollution, irrigation, conservation, and industrial and domestic use of water.

16mm Films and Videocassettes

WATER POLLUTION

Journal Films, Inc., 930 Pitney Ave., Evanston, IL 60202

Price: \$165.00/purchase Level: 7-12

There are things each of us can do about water pollution and energy. The film makes some suggestions on where to start.

WATER POWER

Education Dev. Ctr., 55 Chapel St., Newton, MA 02160

Price: \$140.00/purchase Level: 6-9
\$ 15.00/rental

This film considers the impact of large scale irreversible intervention into the natural environment in the search for energy sources. The example used is the damming of the Volta River in Ghana.

WE USE POWER

Churchill Films, 662 N. Robertson Blvd.,

Los Angeles, CA 90069

Price: \$140.00/purchase Level: K-6

In this film, children explore energy through experiments with wind, water, steam, and electricity; with burning gases in gasoline, diesel, and jet engines. Questions are posed concerning conservation of energy.

WEATHER--AIR IN ACTION SERIES (Three Parts)

Aims Instructional Media Services, Inc., 626 Justin Ave.,
Glendale, CA 91201

Price: \$125.00/purchase (part I) Level: 4-9
\$140.00/purchase (part II)
\$140.00/purchase (part III)

This film series introduces basic concepts of weather and wind behavior. Each film can be purchased individually.

A WELL IN WEST VIRGINIA

Stuart Finley, Inc., 3428 Mansfield Rd.,

Falls Church, VA 22041

Price: \$200.00/purchase Level: 7-12

This fifteen-minute color/sound film is suitable for ecology, environmental education, elementary science, earth science, and social studies. It recounts the moment of success in drilling for natural gas, with background information on geological structure and drilling technology.

16mm Films and Videocassettes

WHAT MAKES THINGS MOVE

Classroom Film Distributors, Inc., 5610 Hollywood Blvd.,
Los Angeles, CA 90028

Price: \$130.00/purchase Level: K-6
\$ 12.00/rental (per day)

This film focuses on human and mechanical energy. The interrelation of all moving things and types of motion are shown.

WHEN THE CIRCUIT BREAKS

Dept. of Energy Film Library. Technical Information Ctr.,
P. O. Box 62, Oak Ridge, TN 37830

Price: free loan Level: 7-12

This film says some important things about the energy crisis and our continuing energy problems. The emphasis is on the increasing demand and diminishing supply of traditional fuels.

WHOLE NEW WORLD

Petroleum Equipment Suppliers Assn.,
1703 First City Nat'l Bank Bldg., Houston, TX 77002

Price: free loan Level: 7-12

This film documents offshore drilling. It also shows how offshore drilling encourages marine life.

WINDS & THEIR CAUSES

Coronet Films, 65 E. So. Water St., Chicago, IL 60601

Price: \$165.00/purchase Level: 4-6

This eleven-minute film shows how winds are created. It describes heating effects of the sun modified by the earth's rotation.

WIRES TO OUR HOUSE

International Film Bureau, Inc., 332 So. Michigan Ave.,
Chicago, IL 60604

Price: \$165.00/purchase Level: 11-12

Various wires leading into homes are channels for transmission of power and communications. This film shows how power is distributed safely.

16mm Films and Videocassettes

WORK, TIME & POWER

Universal Education and Visual Arts, 100 Universal City Plaza,
Universal City, CA 91608

Price: \$165.00/purchase Level: 4-6

The film shows the ways in which various types of engines supply force for machines. Measures of power in terms of "footpound" and "horsepower" are clearly explained.

WORLD BEHIND YOUR LIGHT SWITCH

U.S. Department of Energy, Bonneville Power Administration,
P. O. Box 3621, Portland, OR 97208

Price: Free loan Level: 7-12

This film tells in a general, non-technical way the story of how electricity is produced, transmitted, and distributed. It is suitable for use in all science classes.

THE WORLD BENEATH THE SEA

Modern Talking Picture Service, Inc., 2323 New Hyde Park Road,
New Hyde Park, NY 11040

Price: Free loan Level: 9-12

This film gives an overview of today's modern offshore drilling equipment. Emphasis is on safety and environmental protection.

I. MEDIA

A. Audiovisual

3. Filmstrips and 8mm Filmloops

THE ATOM: MAN'S SERVANT

Encyclopedia Britannica Education Corporation,
425 N. Michigan Ave., Chicago, IL 60611

Price: \$49.50 Level: 7-9

An animated atom is the key symbol in this series of six filmstrips describing the basic concepts of the nature of atomic energy. Diagrams and action photography are used to point out the diverse uses of the atom.

ATOMIC ENERGY: A SERIES

Visual Sciences, Box 599, Suffern, NY 10901

Price: \$15.00 Level: 9-12

This five-filmstrip series includes pictures, charts, and diagrams. It covers atomic safety procedures, history of atomic research, and atomic structure.

ATOMIC PHYSICS: HISTORY OF THE ATOM

Universal Education and Visual Arts,

100 Universal City Plaza, Universal City, CA 91608

Price: \$34.00 Level: 7-12

This series of filmstrips explains the nature of the atom and traces the history and beliefs surrounding it. It also develops the theme of current and future applications for peaceful purposes.

ATOMS & THEIR ENERGY

United Learning, 6633 West Howard Street, Niles, IL 60648

Price: \$30.00 Level: 5-9

This filmstrip introduces basic principles of atomic structure and how atoms hold and release energy. It is suitable as a supplement in chemistry or physics.

BASIC ELECTRICAL PRINCIPLES

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$54.00 Level: 6-9

The set contains four filmstrips, two records or cassettes, and four teacher's guides. It includes demonstrations which define an electric current and illustrates methods of calculating and measuring electricity.

Filmstrips and 8mm Filmloops

BASIC RESOURCES (Two Parts)

Educational Design, Inc., 47 West 13 Street,
New York, NY 10011

Price: \$29.50 (with cassette)

Level: 7-12

Air, water, land, vegetation, and animal life have determined human settlement patterns and life styles. Part 1 shows cultural activities that are based on these resources, while Part 2 focuses on trees and concludes with a look at Germany's Black Forest.

BONNEVILLE DAM: POWER HOUSE OF THE COLUMBIA RIVER

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$18.50

Level: 6-9

This is a full-color, sound filmstrip with a teacher's guide. It examines one of the key units in the development of hydroelectric power on the Columbia River.

CHEMICAL CHANGE: COMBINATION & SEPARATION SERIES

Hubbard, Inc., P. O. Box 105, Northbrook, IL 60062

Price: \$175.00

Level: 9-12

This is a series of seven super 8mm filmloops. It shows various chemical combinations and separations and the concepts that deal with water and light energy interaction.

COMMUNITY FOOD ENERGY FLOW

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$19.50

Level: 6-9

Through full-color nature photography, this sound filmstrip introduces the concept of food energy flow through food chains and food webs. A teacher's guide is included.

CONCEPTS IN SCIENCE SERIES, SET IV

Eye Gate Media, 146-01 Archer Ave, Jamaica, NY 11435

Price: \$74.70 (with cassettes)

Level: 7-9

This set of six filmstrips explores the physical world. Weights and measures, energy, weather, heat, seasons, and the earth's surface are concepts that are covered.

Filmstrips and 8mm Filmloops

CONCEPTS IN SCIENCE SERIES, SET VI

Eye Gate Media, 146-01 Archer Ave., Jamaica, NY 11435
Price: \$74.70 (with cassettes) Level: 7-9
This set of six filmstrips is designed to augment science instruction. The human body, weather forecasting, electrical energy, and the classification of living things are studied.

CONSERVING RESOURCES SERIES: MINERAL RESOURCES

H. M. Elkins Co., 10031 Commerce Ave.,
Tujunga, CA 91042
Price: \$6.00 Level: 4-8
The filmstrip is a survey of our nation's natural resources. It explains how resources affect the lives of people in different regions.

EARTH, ENGINES & INGENUITY: HISTORICAL SOURCES OF ENERGY

Multi-Media Products, Box 5097, Stanford, CA 94305
Price: \$11.95 Level: 9-12
This filmstrip explores the development of an energy consuming society. It includes the history of machines and energy.

THE ECOLOGICAL CRISIS

Q + ED Productions, P. O. Box 1608, Burbank, CA 91505
Price: \$81.50 (records) Level: 7-12
\$87.50 (cassettes)
This is a study of human survival on our planet. It presents the issues of overpopulation, diminishing food supply, environmental pollution, urban congestion, and ecological disturbance.

ECOLOGY: UNDERSTANDING THE CRISIS

Encyclopedia Britannica Education Corporation,
425 N. Michigan Ave., Chicago, IL 60611
Price: \$86.95 Level: 4-9
Ecology holds the key to understanding today's environmental crisis--an understanding vital to the survival of our planet. This filmstrip includes a study of a natural ecosystem undisturbed by man and suggestions for turning the tide of ecological destruction.

Filmstrips and 8mm Filmloops

ELECTRICAL ENERGY

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$17.00 (with cassette) Level: 6-9

This filmstrip explains the fundamentals of electrical energy by showing early experiments with electricity and its wide application in a modern industrial society. It illustrates the need for increasing production of electric power to sustain a high standard of living.

ELECTRICITY

Encyclopedia Britannica Education Corporation,
425 N. Michigan Ave., Chicago, IL 60611

Price: \$57.50 Level: 4-6

This set of seven filmstrips explains the basic concepts of electricity. Included are heat and light from electric current, insulators and conductors, series and parallel circuits, and the use of electromagnetic phenomenon to produce electricity.

ELECTRICITY & ME and ENERGY CONSERVATION

Spartan Graphics, 288 S. State St., Sparta, MI 49345

Price: \$40.00 (both filmstrips) Level: 6-9

These filmstrips cover the generation, transmission, distribution, costs and wise use of electricity. Included is a teacher's guide and activity sheets.

ELECTRICITY AT WORK: A SERIES

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$78.00 Level: 6-9

These full-color sound filmstrips averaging thirteen minutes illustrate the many uses of electricity. The titles are "Light & Heat From Electricity," "Cool Light From Electricity," "Magnetism From Electricity," "The Telegraph & Telephone," "Induction & Transformers," and "Electrolysis."

ELECTRICITY: CELLS & CIRCUITS

Hubbard, Inc., P. O. Box 105, Northbrook, IL 60062

Price: \$175.00 Level: 7-12

This is a series of seven 8mm filmloops. It demonstrates electric cells and circuits.

Filmstrips and 8mm Filmloops

ELECTRICITY IN OUR LIVES

Troll Associates, 320 Rt. 17, Mahwah, NJ 07430

Price: \$24.95

Level: 2-8

This 8mm filmloop explores such concepts as electrical flow from power station to homes. It emphasizes the importance of electricity in our daily lives.

ELECTRICITY IS ENERGY

Outdoor Pictures, Box 277, Anacortes, WA 98221

Price: \$20.00 (slides)

Level: 2-6

\$15.00 (filmstrip)

This color-sound filmstrip deals with electricity as energy. It is suitable for background material or as a supplement to introductory science studies.

ELECTRICITY MAKES MAGNETS

Hubbard, Inc., P. O. Box 105, Northbrook, IL 60062

Price: \$175.00

Level: 7-12

This series of seven 8mm filmloops shows how electricity makes magnets. Concepts from inductive field to electric motors are shown.

ELEMENTARY SCIENCE SERIES

Colonial Films, 4315 N. E. Expressway Road,
Doraville, GA 30340

Price: \$480.00

Level: 1-8

This is a series of 88 filmstrips with 88 teacher's guides. Some subjects included are living matter, air and water, electricity, heat, light, and energy.

ENERGY: A STUDY OF RESOURCES

Q + ED Productions, P. O. Box 1608, Burbank, CA 91505

Price: \$110.50 (records)

Level: 7-12

\$122.50 (cassettes)

This series presents a problem which threatens to change the character of human life on earth within the immediate future. It illustrates a need for a change of lifestyle to conserve our remaining energy reserves.

Filmstrips and 8mm Filmloops

ENERGY: ABILITY TO DO WORK (A Series)

Aims Instructional Media Inc., 626 Justin Ave.,
Glendale, CA 91201

Price: \$130.00

Level: 1-6

This filmstrip series uses a basic approach to energy concepts such as kinetic, sunlight, chemical, human, plant, mechanical, gravitation, electrical, and heat. Each topic is illustrated by example in an inquiry-discovery treatment with a reinforcement mode.

ENERGY & THE EARTH

Lyceum, Inc., Box 1295, La Punte, CA 91749

Price: \$46.00 (with cassette)

Level: 6-12

This is a two-part color filmstrip. It covers the development of the earth's resources, understanding of basic energy limitations; and renewable and non-renewable energy resources.

ENERGY & YOU: CONSERVING ENERGY

Visual Education Consultants, Inc., P. O. Box 52,
Madison, WI 53701

Price: \$7.50

Level: 7-12

This black-and-white filmstrip outlines many ways we can cut down our own consumption of fuel to make our energy supplies stretch further. It describes the "energy crisis".

THE ENERGY CRISIS

Donars Productions, P. O. Box 24, Loveland, CO 80537

Price: \$8.00

Level: 5-8

This color-captioned filmstrip discusses the growing need for energy and our dwindling reserves. Possible solutions offered are the use of nuclear energy, wind power, solar energy, and harnessing the tides.

THE ENERGY CRISIS: DEPLETING THE WORLD'S RESOURCES

Current Affairs, 24 Danbury Road, Wilton, CT 06897

Price: \$24.00

Level: 7-12

This filmstrip is an in-depth analysis of the effects energy shortages could have on the quest for economic and social progress. The issue of developing new energy sources while protecting our environment is also discussed.

Filmstrips and 8mm Filmloops

ENERGY FLOW IN A COMMUNITY

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$17.50

Level: 1-8

This is a nine-minute, fifty-seven-frame filmstrip. It uses a schematic approach to record the flow of energy through natural communities.

ENERGY: HERE TODAY - GONE TOMORROW?

Eye Gate Media, 146-01 Archer Ave., Jamaica, NY 11435

Price: \$49.80

Level: 7-9

This filmstrip set presents our dependence on energy in almost all aspects of business and social life, the varied sources of energy, and how energy is wasted. It concludes by suggesting some long-range solutions and attitudes for the viewer to evaluate.

ENERGY: IMPACT ON VALUES & LIFESTYLES

Current Affairs, 24 Danbury Road, Wilton, CT 06897

Price: \$24.00

Level: 7-12

The end of an era of abundant and relatively cheap energy has far-reaching implications for national needs and individual aspirations. This filmstrip assesses the impact of more expensive energy and energy shortages on life-styles, societal patterns, and existing values.

ENERGY: KEY TO DEVELOPMENT

EMC Corporation, 180 E. Sixth St., St. Paul, MN 55101

Price: \$9.00

Level: 7-12

This sound filmstrip with teacher's guide focuses on the essential ingredient for an industrial nation - energy resources to power the development of its raw materials into products for consumption in the marketplace. Case studies examine Siberia's development of hydroelectric power and its petroleum and natural gas reserves.

ENERGY: THE KEY TO MAN'S GREATEST GOALS (Two Sets)

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$53.00 (each set)

Level: 6-9

\$99.50 (both sets)

The history of man's use of energy and today's problems of energy conservation and development are explored in these sound filmstrips. Both sets are in color.

Filmstrips and 8mm Filmloops

ENERGY: MAKING THINGS GO

Pathescope Education Media, Inc., 71 Weyman Ave.,
New Rochelle, NY 10802

Price: \$28.00

Level: 4-8

This unit includes a filmstrip with sound, spirit masters, and a teacher's manual. It focuses on what energy is, its sources, its different forms and their levels of use.

ENERGY: WHAT LIES AHEAD?

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$17.00

Level: 6-9

This full-color, sound filmstrip dramatizes the need for energy conservation and the urgency of finding new resources to replace dwindling reserves of fossil fuels. It includes a teacher's guide and cassette or record.

ENVIRONMENTAL HEALTH: ENERGY & THE ENVIRONMENT (Two Parts)

Southern California Edison and Bosustow Productions,
1649 11th St., Santa Monica, CA 90404

Price: \$39.00

Level: 7-12

Part I is a general view of the use of energy and the development of complex technological systems. Part II discusses conservation responsibilities and encourages finding imaginative, earth-conserving methods of energy production.

FIELD TRIPS OUT OF THE ORDINARY

Eye Gate Media, 146-01 Archer Ave., Jamaica, NY 11435

Price: \$74.70 (with cassette)

Level: 7-12

This filmstrip set takes students on field trips to an oil well, a coal mine, a steel mill, a lumber mill, a nuclear plant, and an oceanographic institute. The use of this series allows students to see energy production and industrial consumption of energy.

FLAMES & ENERGY

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$2.25 (free to teachers)

Level: 2-5

This filmstrip with sound and color presents the impact on our environment of burning fuels for energy. It also gives suggestions for reducing the resultant pollution.

Filmstrips and 8mm Filmloops

FORCE & MOTION (A Series)

Hubbard, Inc., P. O. Box 105, Northbrook, IL 60062

Price: \$200.00

Level: 6-12

The basic concepts of force and motion are vividly portrayed by demonstrations and special effects in these 8mm filmloops. Graphic examples of acceleration, inertia, friction, and centrifical force are shown.

FROM RADIO TO GAMMA RAYS

Visual Education Consultants, Inc., P. O. Box 52,
Madison, WI 53701

Price: \$7.50

Level: 7-12

In this filmstrip, photographs and diagrams are used to explain the electromagnetic spectrum from radio waves to gamma rays. The wave nature of radiant energy is discussed along with the various uses scientists have found for each portion of the electromagnetic spectrum.

FUEL CELLS

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$1.10 (free to teachers)

Level: 6-12

This filmstrip explains why research in fuel cells is important. It presents the characteristics of a natural gas fuel cell.

FUEL FOR YOUR CAR

Standard Projector and Equipment Company,
3080 Lake Terrace, Glenview, IL 60025

Price: \$7.00

Level: 1-5

This presentation shows how gasoline is obtained from petroleum. Emphasis is on the problems in drilling with a brief explanation of the process which takes oil to the refinery.

Filmstrips and 8mm Filmloops

GLOBAL EMERGENCY

Guidance Assoc., 757 Third Ave., New York, NY 10017

Price: \$52.50

Level: 7-12

This filmstrip with teacher's guide examines advantages, drawbacks, and availability of fossil fuels, nuclear, solar, geothermal, wind, and tidal energy resources. It helps students discuss future life-style changes that may be necessary to reduce energy waste and diminish human suffering and environmental damage caused by technology.

HEAT

United Learning, 6633 West Howard Street, Niles, IL 60648

Price: \$30.00

Level: 1-6

This filmstrip introduces basic principles of heat--what it is and how it works. It is a useful supplement to elementary science.

HEAT: A FORM OF RADIANT ENERGY

Visual Education Consultants, Inc., P. O. Box 52
Madison, WI 53701

Price: \$7.50

Level: 7-12

This filmstrip utilizing question-and-answer style is a complete lesson on heat. The difference between heat and temperature and many other related concepts are explained.

HEAT & COLD SERIES

Eye Gate Media, 146-01 Archer Ave., Jamaica, NY 11435

Price: \$74.70 (with cassettes)

Level: 9-12

Each filmstrip in this set first reviews fundamentals and then brings in applications for each concept. Topics included are radiant energy, low temperatures, high temperatures, and conversion of heat into useful work.

Filmstrips and 8mm Filmloops

HEAT & ITS PROPERTIES

Long FilmSlide Svc., 7505 Fairmount Ave.,
El Cerrito, CA 94530

Price: \$5.00

Level: 7-12

This filmstrip shows how to produce heat and what heat is. This heat storing ability of land and water is also explored.

HEAT & TEMPERATURE: A SERIES

Troll Assoc., 320 Rt. 17 Mahwah, NJ 07430

Price: \$99.80

Level: 2-6

"Heat and Temperature" is a four-part, super 8mm series dramatizing the many causes and effects of heat and temperature. It also shows how to measure temperature with thermometers.

HEATING YOUR HOME

Long FilmSlide Svc., 7505 Fairmount Ave.,
El Cerrito, CA 94530

Price: \$5.00

Level: 7-12

This filmstrip shows methods of heat distribution. Included are air conditioning, heating, and different types of insulation.

HIGH SCHOOL PHYSICS SERIES: PROPERTIES OF STATIC ELECTRICITY

Universal Education and Visual Arts

100 Universal City Plaza, Universal City, CA 91608

Price: \$330.00

Level: 7-12

This is a series of fifteen filmloops. The series provides a comprehensive introduction to the properties of static electricity.

Filmstrips and 8mm Filmloops

HOT & COLD

Encyclopedia Britannica Ed. Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$41.00

Level: 4-6

This film introduces kinetic molecular theory and encourages maximum student participation and experimentation. These concept-developing experiments lead to an understanding of the nature of solids, liquids, and gases.

HOW ELECTRICITY WORKS

Universal Education and Visual Arts,
100 Universal City Plaza, Universal City, CA 91608

Price: \$25.00

Level: 7-12

This filmstrip is a nontechnical explanation of the complexities of electricity. It includes practical knowledge of current behavior and safety practices.

HOW THINGS WORK SERIES: DISCOVERING SIMPLE POWER & ENERGY

Troll Assoc., 320 Rt. 17, Mahwah, NJ 07430

Price: \$24.95

Level: 2-8

This super 8mm filmloop offers an understanding of the basic concepts of force, energy, and motion. It also shows how man puts force and energy to work for him.

HOW TO SAVE ELECTRICITY

Encore Visual Education, Inc., 1235 South Victory Blvd.,
Burbank, CA 91502

Price: \$21.00

Level: 5-12

This filmstrip with teacher's guide suggests ways to save money on electric bills, enjoy additional benefits from electricity, and help alleviate the energy shortage. Concepts included are how electricity is measured and what the individual can do to decrease overall power consumption.

Filmstrips and 8mm Filmloops

INDUSTRIALIZATION - EXTRACTIVE SERIES

Hubbard, Inc., P. O. Box 105, Northbrook, IL 60062

Price: \$100.00

Level: 5-9

This 8mm filmloop series explores the removal of raw materials from the earth. Various mining techniques are shown.

INQUIRY INTO HEAT

Rand McNally & Company, P. O. Box 7600,
Chicago, IL 60680

Price: \$24.00

Level: 7-12

This filmstrip series explores the nature of heat. It can be used with most investigative science units.

INTERDEPENDENT NATION: U.S.A.

H. M. Elkins Co., 10031 Commerce Ave.,
Tujunga, CA 91042

Price: \$6.00

Level: 4-8

This filmstrip is a survey of our nation's topography, climate, soil, and natural resources. It explains what the people across the U.S.A. do for a living and the special items they produce through agriculture, mining, and manufacturing.

INTRODUCTION TO THE ENERGY CYCLE AND TROPHIC LEVELS

Ward's Natural Science Establishment, Inc.,

P. O. Box 1712, Rochester, NY 14603

Price: \$29.00

Level: 9-12

This filmstrip is a multimedia unit. It discusses solar energy in biological processes.

LOOK TO THE FUTURE...THE GAS COMPANY IN YOUR COMMUNITY

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$1.65 (free to teachers)

Level: 6-9

This is a color filmstrip with a teacher's guide. It shows how the gas company must try to predict the future by plotting trends, conducting scientific research, and estimating a community's growth.

Filmstrips and 8mm Filmloops

LOUISIANA SOCIAL STUDIES SERIES: MINERAL RESOURCES

Panoramic Teaching Aids, Inc., 1610 Rapides Ave.,
Alexandria, LA 71301

Price: \$13.50

Level: 4-12

This filmstrip is a color and sound description of topographical and subsurface locations of natural resources. It focuses on the importance of natural resource usage and the economy.

LOUISIANA SOCIAL STUDIES SERIES: MINERAL RESOURCES & CONSERVATION

Panoramic Teaching Aids, Inc., 1810 Rapides Ave.,
Alexandria, LA 71301

Price: \$13.50

Level: 4-12

This filmstrip describes mineral usage by the petro-chemical industry. It explains methods of total mineral recovery and conservation.

MAGNETS MOVE ELECTRONS: A SERIES

Hubbard, Inc., P. O. Box 105, Northbrook, IL 60062

Price: \$150.00

Level: 7-12

This is a series of six super 8mm filmloops. It shows how magnets move electrons and illustrates concepts from electric generators to alternating current.

MATTER AND ENERGY: A SERIES

United Learning, 6633 West Howard St., Niles, IL 60648

Price: \$55.00

Level: 5-12

These filmstrips are suitable background or supplemental material for any physical science course. The series covers properties of matter and how it changes, and forms of energy and force.

Filmstrips and 8mm Filmloops

MORE TO COME

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$3.85 (free to teachers) Level: 4-8

This filmstrip, with sound and color, shows how scientists and technologists can estimate the energy resources still to be found inside the earth. Natural gas is used as an example for developing the concepts of "potential supply" and "proven reserve."

NATURAL RESOURCES & NEW FRONTIERS (1650-1890)

Singer Education Division, Society for Visual Education,
1354 Diversey Parkway, Chicago, IL 60614

Price: \$16.50 Level: 6-9

This is a full-color sound filmstrip with teacher's guide and record or cassette that features photographs, dioramas, paintings and documents depicting the development of America's great mining wealth. It focuses on development of the western frontier.

NEW OIL FOR ENERGY

Visual Education Consultants, Inc., P. O. Box 52,
Madison, WI 53701

Price: \$5.50 Level: 4-12

This filmstrip tells of the many ways man uses oil and gas. It explains how oil and natural gas were formed and the methods used by geologists to try to locate these valuable resources.

NUCLEAR ENERGY

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$17.00 Level: 6-9

This full-color and sound filmstrip with teacher's guide and record or cassette illustrates the structure of the atom and the process of nuclear fission. It presents the idea that nuclear energy will be an important supplement to the reserves of fossil fuels.

Filmstrips and 8mm Filmloops

AN OIL FAMILY OF IRAN

Singer Education Division, Society for Visual Education,
1354 Diversey Parkway, Chicago, IL 60614

Price: \$17.50

Level: 4-8

This is a ten-minute color filmstrip with a teacher's guide and record or cassette. It includes a visit with Fairboz, an Iranian boy who provides viewers with a rare, behind-the-scenes look at the Iranian oil industry.

OUR FRIEND THE ATOM: A SERIES

Walt Disney Media Co., 500 S. Buena Vista St.,
Burbank, CA 91521

Price: \$119.00

Level: 4-10

This is a filmstrip series about atomic energy. It provides clear illustrations of complex atomic theories.

OUR NATIONAL RESOURCES SERIES: MINERALS

United Learning, 6633 West Howard St., Niles, IL 60648

Price: \$10.00

Level: 5-12

This filmstrip describes various mineral resources of the U.S. It is suitable as an earth science supplement.

PEACETIME USE OF ATOMIC ENERGY

Visual Education Consultants, Inc., P. O. Box 52,
Madison, WI 53701

Price: \$7.50

Level: 4-12

This filmstrip explains the importance of atomic energy both for today and tomorrow. It tells how scientists have harnessed the atom for constructive uses in medicine, agriculture, industry, and space.

PHYSICAL SCIENCE SERIES

Encyclopedia Britannica Ed. Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$83.50

Level: 4-6

This series is a set of five color filmstrips. Subjects included in the set are electricity, light lenses, magnetism, and simple machines.

Filmstrips and 8mm Filmloops

PHYSICS

Edwin Shapiro Co., 43-55 Kissena Blvd., Flushing, NY 11355

Price: \$59.00

Level: 7-9

This is a set of six filmstrips and three records. Subjects included are sound, light, static electricity, current electricity, magnetism, temperature, and heat.

PHYSICS: IN SEARCH OF THE ATOM SERIES: SEVENTEENTH CENTURY

RMI Media Production, Inc., 701 Westport Rd.,
Kansas City, MO 64111

Price: \$25.00

Level: 10-12

This filmstrip explains that the 17th Century was especially important in the search for the atom. It discusses the discoveries that chemical change relates to subvisible particles.

PHYSICS: RADIOACTIVITY & IONIZATION: A SERIES

Hubbard, Inc., P. O. Box 105., Northbrook, IL 60062

Price: \$150.00

Level: 7-12

In these six super 8mm filmloops, fundamental concepts of radioactivity, ionization and associated phenomena are examined. The concept of half-life and different methods and devices for dealing with radioactivity are considered.

PLANNING THE HUMAN COMMUNITY

Singer Education Division, Society for Visual Education,
1354 Diversey Parkway, Chicago, IL 60614

Price: \$18.50

Level: 6-9

This full-color sound filmstrip with teacher's guide and cassette illustrates the importance of energy sources to the human community. It shows how water power, fossil fuels, and nuclear reactors provide electrical energy to the modern community.

POWER: SHORTAGE & POLLUTION

Pathescope Ed. Media, Inc., 71 Weyman Ave.,
New Rochelle, NY 10802

Price: \$28.00

Level: 4-8

This unit includes sound, spirit masters, and a teacher's manual. It investigates causes of power shortages, power-related pollution, and possible new ways to produce power.

Filmstrips and 8mm Filmloops

PRACTICAL GUIDE TO THE ENERGY CRISIS

Prentice Hall Media, 150 White Plains Rd., Tarrytown, NY 10591
Price: \$50.00 Level: 7-12

Two filmstrips with records or cassettes and program guide expose students to the causes and effects of the energy crisis. Part I, "Reasons for the Crisis", examines the scientific and sociological factors behind the energy crisis; Part II, "Responding to the Crisis", considers how the individual and society can reduce energy consumption by following some common sense guidelines.

RADIANT ENERGY

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$17.00 Level: 6-9

This full-color, sound filmstrip with record or cassette and teacher's guide shows how energy from the sun is fundamental to life and movement. It explains the dynamics of light, color, and heat.

RUMANIA'S BLACK GOLD: PETROLEUM

Singer Education Division, Society for Visual Education,
1345 Diversey Parkway, Chicago, IL 60614

Price: \$18.50 Level: 6-9

This is a full-color, sound filmstrip with a teacher's guide. It presents a trip to the oil town, Ploesti, Rumania, and includes visits to oil fields, refineries, workers' homes, and a high school.

SAVING ENERGY

Educational Activities, Inc., 1937 Grand Ave.,
Baldwin, NY 11510

Price: \$14.50 (cassette)
\$13.50 (record)

Level: 2-6

This sound filmstrip set gives many practical suggestions for energy conservation and responsibility. It contains a teacher's guide.

Filmstrips and 8mm Filmloops

SCIENCE FUNDAMENTALS: A SERIES

Universal Education & Visual Arts, 100 Universal Plaza,
Universal City, CA 91608

Price: \$70.00

Level: 2-8

The filmstrips encourage perception of the world as a place of biological and physical wonders. It introduces the relationship between energy and life.

THE STEAMBOAT: FULTON

Educational Projections Co., 3070 Lake Terrace,
Glenview, IL 60025

Price: \$7.00

Level: 3-6

This filmstrip presents an historical perspective on early steam power. It is suitable to supplement introductory energy education.

STRUCTURE OF MATTER: A SERIES

United Learning, 6633 West Howard St., Niles, IL 60648

Price: \$55.00

Level: 5-12

This series of four filmstrips covers basic principles of atomic structure. Included are atomic theory, atomic particles, how atoms combine, and the atom's internal energy.

TECHNOLOGICAL RESOURCES

Educational Design, Inc., 47 West 13 St.,
New York, NY 10011

Price: \$29.50 with cassette

Level: 7-12

Part 1 of this two part set shows how energy is made from hydroelectric power and fossil fuels and possible future sources of energy. Part 2 begins with a close-up of copper and iron mining, then compares two cultures - one highly industrialized and the other rural.

TEXANS & THEIR LAND: OIL, GAS, AND PETROCHEMICALS

Associated Educators, Box 492, Troy, AL 36081

Price: \$10.00

Level: 4-12

This filmstrip explores the history of oil and gas production in Texas. It explains the present refining and petrochemical industry. (Note: This material is also offered on an audio-tape which contains additional information. Price of audio-tape is \$12.00)

Filmstrips and 8mm Filmloops

USING NATURAL RESOURCES: A SERIES

Ward's Natural Science Establishment, Inc., P. O. Box 1712,
Rochester, NY 14603

Price: \$44.00

Level: 7-12

This is a set of six filmstrips with a manual. It discusses importance of basic natural resources--water, soils, and minerals, and the careful exploitation of fossil fuels.

WE LEARN ABOUT FUELS

Standard Projector & Equipment Company, 3080 Lake Terrace,
Glenview, IL 60025

Price: \$7.00

Level: 1-5

This filmstrip includes a tour of a science museum. Students are introduced to different kinds of fuels used for heat and power: wood, coal, peat, charcoal, oil, gasoline, kerosene, gas, uranium, and hydrogen.

WHAT IS IT SERIES: WHAT IS ENERGY; WHAT IS AN ATOM; WHAT IS ELECTRICITY

Benefic Press, 10300 W. Roosevelt Rd., Westchester, IL 60153

Price: \$6.30 per filmstrip

Level: 1-8

Each filmstrip is a basic introduction to a specific subject. The series is designed to facilitate inquiry and to support other science-related activities.

WHAT MAKES IT WORK?

Standard Projector & Equipment Company, 3080 Lake Terrace,
Glenview, IL 60025

Price: \$7.00

Level: 1-5

This filmstrip is an elementary introduction to simple machines. It shows how they make man's work easier.

WONDERS OF SCIENCE SERIES: FLASH, CRASH, & GLOW - ELECTRICITY IN A BULB

Troll Assoc., 320 Rt. 17, Mahwah, NJ 07430

Price: \$8.00

Level 1-8

Electric current, lightning and static electricity are explored in this filmstrip. The concept of atomic structure and the movement of electrons from atom to atom are also described.

Filmstrips and 8mm Filmloops

WORLD ABOVE US SERIES: THE SUN

Troll Associates, 320 Rt. 17, Mahwah, NJ 07430
Price: \$14.00 Level: K-4
This filmstrip with cassette gives basic information about the sun. It is a simple presentation so children can easily learn about the ultimate energy source.

THIS WORLD OF ENERGY: A SERIES

National Geographic Educational Services,
17th and M Streets NW, Washington, DC 20036
Price: \$74.50 Level: 5-12
This is a series of five color/sound filmstrips. Titles are "Energy in the Earth," "Using Energy," "Fossil Fuels," "Nuclear Power," and "Energy for the Future."

WORLD OF PLANTS SERIES: HOW PLANTS MAKE FOOD

Long Filmslide Svc., 7505 Fairmount Ave.,
El Cerrito, CA 94530
Price: \$28.50 Level: 4-9
Five filmstrips are included in this set. Topics included are plants and man, kinds of plants, how plants make food, how plants store food, and how plants reproduce.

YOUR ELECTRIC COMPANY

Standard Projector and Equipment Co., 3080 Lake Terrace,
Glenview, IL 60025
Price: \$7.00 Level: 1-5
This filmstrip features a tour through an electric company showing generators, furnaces, substation, steam turbine, and all the planning steps necessary to bring electric service. It is an introduction to the electric industry.

YOUR GAS COMPANY

Standard Projector and Equipment Co., 3080 Lake Terrace,
Glenview, IL 60025
Price: \$7.00 Level: 1-5
This filmstrip takes students on a tour of the gas company to see how it supplies gas for the city's occupants. It shows how the gas is piped from the fields to homes.

I. MEDIA

A. Audiovisual

4. Transparencies and Slides

BUILDING A HYDRO-ELECTRIC POWER COMPANY

Donars Productions, P. O. Box 24, Loveland, CA 80537
Price: \$7.00 Level: 5-8

Ten slides with printed notes illustrate the main aspects of the construction of the Churchill Falls hydroelectric power complex in Canada. It is the largest single-site producer of energy in the western world.

CONSERVATION OF NATURAL RESOURCES: MINERAL RESOURCES

Creative Visuals, P. O. Box 1911, Big Spring, TX 79720
Price: \$58.50 Level: 7-12

This set of eight transparencies comes with a manual. It is designed to instill awareness of our dependency on natural resources and the methods to preserve them.

EARTH SCIENCE: LABORATORY INVESTIGATIONS

Creative Visuals, P. O. Box 1911, Big Spring, TX 79720
Price: \$102.05 Level: 7-12

This set of thirteen transparencies includes a teacher's manual. They deal with specific natural forces and events through suggested lab experiments.

ENERGY ALTERNATIVES IN OUR FUTURE

Energy & Man's Environment, 0224 S.W. Hamilton,
Suite 301, Portland, OR 97201
Price: \$25.00 Level: 9-12

This multimedia experience contains eighty slides and an audiotape of a speech by the chairman of the Department of Engineering, University of Idaho. It deals with future energy sources and uses nontechnical language.

FACTS OF POWER & LIGHT

GTE Sylvania, 100 Endicott St., Danvers, MA 01923
Price: free (postage only) Level: 4-12

"Facts of Power and Light" is a fifteen-minute slide presentation concerning modern light sources and the use of lighting and electricity in the home. It also suggests ways to reduce the use of electrical energy.

Transparencies and Slides

GEO THERMAL ENERGY

James L. Ruhle & Associates, P. O. Box 4301,
Fullerton, CA 92631

Price: \$22.00

Level: 9-12

Geothermal energy is one of the cleanest forms of energy. Included in this slide program is a look at two geothermal steam fields, the Geysers Field in California and the Cerro Prieto Field in the Mexican State of Baja California.

HEAT: A SERIES

Photo Motion Corporation, Morrison Building,
King of Prussia, PA 19406

Price: \$69.95

Level: 7-12

This series of transparencies clearly depicts the relationship of heat and molecular activity. Motion illustrates heat transfer, through conduction, convection, and radiation, while home heating systems show the practical application of these basic principles of heat transfer.

LIGHTING & CONVECTION CURRENTS

GTE Sylvania, 100 Endicott St., Danvers, MA 01923

Price: free (postage only)

Level: 6-12

"Lighting and Convection Currents" is a seven-minute presentation of the ways in which convection currents, first described by Archimedes, have been put to use by modern lighting scientists. Convection currents are needed to provide high-level lighting without increasing the energy demand of lamps.

MATTER, ENERGY & CHANGE

DCA Ed. Prod., 424 Valley Rd., Warrington, PA 18976

Price: \$36.95

Level: 6-9

This group of transparencies deals with the elementary laws of physics and chemistry. Density, atoms, molecules, and physical and chemical changes are included.

Transparencies and Slides

METEOROLOGY & ASTRONOMY SERIES

Educational Record Sales, 157 Chambers Street,
New York NY 10007

Price: \$65.00

Level: 7-12

This is a set of thirteen transparencies. It covers weather fronts, weather maps, world climate regions, jetstream activity, relative size of planets, eclipses, the sun, and its effects on the earth, and provides a background for earth or space science study.

MODERN PHYSICAL SCIENCE SERIES

United Transparencies, Inc. P. O. Box 688,
Binghamton, NY 13902

Price: \$212.30

Level: 7-12

This series of 106 transparencies presents modern theories of atomic structure. The focus is on the relationship between matter and energy.

MODERN PHYSICS SERIES

United Transparencies, Inc., P. O. Box 688,
Binghamton, NY 13902

Price: \$308.00

Level: 7-12

This series of 151 transparencies covers atomic structure, nuclear reactions, heat energy, wave motion, and sound. It is designed to be used with any secondary physics text.

MODERN SCIENCE: EARTH, MATTER, & SPACE SERIES

United Transparencies, Inc., P. O. Box 688,
Binghamton, NY 13902

Price: \$162.25

Level: 7-12

This series of eighty-seven transparencies emphasizes basic principles and concepts of earth science. Included is a study of matter, the universe, the atmosphere, and energy.

Transparencies and Slides

MODERN SCIENCE: FORCES, CHANGES, & THE UNIVERSE

United Transparencies, P. O. Box 688,
Binghamton, NY 13902

Price: \$202.40

Level: 10-12

This is a series of 100 transparencies with illustrations and charts. It focuses on important energy systems and structures that operate within the physical universe.

MODERN SCIENCE: MAN, MATTER, & ENERGY SERIES

United Transparencies, P. O. Box 688,
Binghamton, NY 13902

Price: \$190.58

Level: 10-12

This series of 100 transparencies is designed to supplement any general science text. It includes tables, diagrams, systems, and structures and focuses on the relationship between life and energy.

NEW SOURCES OF ENERGY

James L. Ruhle & Associates, P. O. Box 4301,
Fullerton, CA 92631

Price: \$50.00 (printed narration)
\$75.00 (cassette)

Level: 9-12

This is a general review of several potential new sources of energy. It includes a look at environmental problems associated with the use of fossil fuels such as coal.

NUCLEAR POWER REACTOR

Donars Production, P. O. Box 24, Loveland, CO 80537

Price: \$7.00

Level: 5-8

"Nuclear Power Reactor" shows views of the main components of a nuclear power reactor station. The ten slides in the series come with printed notes.

PHYSICAL SCIENCE

Educational Record Sales, 157 Chambers Street,
New York, NY 10007

Price: \$88.00

Level: 7-12

This is a set of twenty transparencies. It covers power, power transmission, magnetism, circuits, atomic structure, fission, and reactors.

Transparencies and Slides

PHYSICAL SCIENCE PROJECTUALS: SERIES FS 23

AEVAC, Inc., 1500 Park Ave., So. Plainfield, NJ 07080

Price: \$84.00

Level: 7-12

These seventy-two color transparencies come with a teacher's guide. They provide introductory study of physical science from electricity to nuclear energy.

PHYSICS OF MATTER

Creative Visuals, P. O. Box 1911, Big Spring, TX 79720

Price: \$360.40

Level: 7-12

This set contains fifty-three transparencies and a teacher's manual. It forms a comprehensive introductory study of physics, including atomic structure, with emphasis on scientific reasoning.

I. MEDIA

B. Books

1. Background Reading Material

ALTERNATIVE SOURCES OF ENERGY

The Seabury Press, 815 Second Ave., New York, NY 10017

Price: \$7.95

Level: 6-12

Alternative Sources of Energy is a comprehensive guide which can help anyone cope with the energy crunch. It also deals with food shortages and inflation.

ASK ME A QUESTION ABOUT THE ATOM

Author: S. Rosenfeld

Harvey House, Div. of E. M. Hale & Co.,

20 Waterside Plaza, New York, NY 10010

Price: \$4.69

Level: 5-8

This book is suitable as enrichment or supplementary material for discussion or inquiry. It covers basic atomic structure in simple terms.

ATOMIC ENERGY (1970)

Author: M. Gaines

Grosset & Dunlap, Inc., Publishers, 51 Madison Ave.,
New York, NY 10010

Price: \$4.49

Level: 8-12

This book outlines the physical principles behind nuclear power. It also describes the peaceful uses of the atom.

ATOMIC ENERGY FOR HUMAN NEEDS (1973)

Author: D. R. Michaelson

Julian Messner Div., Simon & Schuster,

Simon & Schuster Bldg., 1230 Ave. of the Americas,
New York, NY 10020

Price: \$7.29

Level: 7-12

This book covers the ways in which atomic energy is being used. Uses in fields such as medicine, industry, and agriculture are documented.

Background Reading Material

ATOMS & ENERGY (1976)

Author: Ardley

Franklin Watts, Inc., 730 Fifth Ave., New York, NY 10019

Price: \$5.90

Level: 5-12

Atoms and Energy explores the efforts to harness the energy of the atom. The topics covered are how atoms join together and break apart, the uses and dangers of radiation, and the nature of nuclear energy.

THE AUTONOMOUS HOUSE: DESIGN AND PLANNING FOR SELF SUFFICIENCY

Authors: Brenda and Robert Vale

Universe Books, 381 Park Avenue South, New York, NY 10016

Price: \$10.00 (clothbound)

\$ 4.95 (paperback)

Level: 12

Two architects offer practical solutions to the building of a house that operates independently within its immediate environment. This book is suitable for individual study or class projects.

CARELESS ATOM (1969)

Author: S. Novick

Houghton-Mifflin Company, Two Park Street, Boston, MA 02107

Price: \$5.95

Level: 9-12

Careless Atom is an exploration of the present and potential dangers resulting from nuclear reactors. It is written in nontechnical language.

CONCEPT OF ENERGY SIMPLY EXPLAINED (1964)

Author: M. Mott-Smith

Dover Publications, Inc., 180 Varick St., New York, NY 10014

Price: \$2.75 (paperback)

Level: 10-12

Energy conservation, entropy, engines, and similar topics are covered with stress on nineteenth and twentieth century developments. This book contains thirty-three illustrations.

Background Reading Material

THE CONCRETE APPROACH TO ENERGY CONSERVATION

Portland Cement Association, Old Orchard Rd,
Skokie, IL 60076

Price: \$2.10

Level: 10-12

This book presents data for analyzing and comparing insulating properties of concrete with other types of construction. It demonstrates the energy-saving advantages of concrete.

CONSIDER THE PROCESS OF LIVING

Author: W. H. Eddy, Jr. et al.
Conservation Foundation, 1717 Massachusetts Ave., NW,
Washington, DC 20036

Price: \$8.00

Level: 9-12

This background material emphasizes the basic elements that comprise the web of life. It introduces the reader to foundations of plant and animal life: air, water, earth, and energy.

COPING WITH THE OIL CRISIS: FRENCH AND GERMAN EXPERIENCES (1975)

Author: Horst Mendershausen
Johns Hopkins University Press, Baltimore, MD 21218

Price: \$2.95 (paperback)

\$7.50 (hardcover)

Level: 12

This book explains and compares the roles of France and The Federal Republic of Germany in the traditional pattern of world-wide oil relations. It describes how this pattern has changed.

COUNTDOWN TO A NUCLEAR MORATORIUM

Environmental Action Foundation, Dupont Circle Building,
Suite 724, Washington, DC 20036

Price: \$3.00

Level: 10-12

This series of articles presents an overview of the safety and economic arguments against nuclear power. It also analyzes the potentials for energy conservation and renewable resources.

Background Reading Material

DAMMING THE WEST: THE REPORT ON THE BUREAU OF RECLAMATION

Authors: Berkman and Viscusi
Penguin Books, 299 Murray Hill Parkway,
East Rutherford, NJ 07073

Price: \$2.50

Level: 11-12

This book is part of the Nader Study Group Reports. It deals with damming of western rivers and is suitable for use in social studies or environmental education classes as a basis for discussion or individual study and research.

DAWNING OF SOLAR CELLS

Author: D. Morris
Institute for Local Self-Reliance, 1717 18th Street NW,
Washington, DC 20009

Price \$2.00

Level: 9-12

This book is a guide to the potential for generating electricity from solar energy. It serves as a basic introduction to the technology and economics of solar cells.

DIRECT USE OF THE SUN'S ENERGY

Author: F. Daniels
Ballantine Books, A Division of Random House, Inc.,
201 East 50th Street, New York, NY 10022

Price: \$1.95

Level: 6-12

This book is an overview of solar energy with emphasis on global applications. It contains basic information in a nontechnical form.

THE EARLY PETROLEUM INDUSTRY

Author: Paul H. Giddens
Porcupine Press, 1317 Filbert St., Philadelphia, PA 19107
Price: \$17.50

Level: 10-12

A two-part volume, this publication deals first with the early history of the petroleum industry. The second part is a bibliography of materials which covers the early years of the petroleum industry in this country.

Background Reading Material

EASI-GUIDE TO CONSERVING ENERGY AND MATERIAL

Author: Forest H. Belt

H. W. Sams & Co., Inc., 4300 W. 62nd St.,
Indianapolis, IN 46268

Price: \$3.50

Level: 9-12

This book contains simple tips on conserving energy. It emphasizes coping with energy and material shortages.

ECOLOGICAL FANTASIES: DEATH FROM FALLING WATERMELONS

Author: C. A. Adler

Educational Sales Department, Dell Distributing, Inc.,
1 Dag Hammarskjold Plaza, 245 East 45th Street,
New York, NY 10017

Price: \$2.95

Level: 10-12

Adler points out that over 500 recently printed books attempt to scare us with data that time is running out on the world. His book is a refutation of the we-are-killing-our-environment theorists.

ECONOMICS OF ENERGY (1975)

Author: L. E. Grayson

Darwin Press, Inc., Box 2202, Princeton, NJ 08540

Price: \$16.95 (hardcopy)

\$ 6.95 (paperback)

Level: 10-12

This book reviews the economic dimensions of energy supply and demand and shortages. It includes governmental regulations and new technology sources in the U.S. and overseas.

EFFICIENT ELECTRICITY USE: A HANDBOOK FOR AN ENERGY CONSTRAINED WORLD

Pergamon Press, Maxwell House, Fairview Park,
Elmsford, NY 10523

Price: \$20.00

Level: 11-12

This book is a complete guide to understanding and coping with energy shortages. It covers industrial, commercial, and residential uses of energy, as well as energy alternatives.

Background Reading Material

ELECTRICITY: THE FACTS & THE FUTURE

Wisconsin Electric Power Co., 231 West Michigan,
Milwaukee, WI 53201

Price: Individual copies free

Two or more cost \$.50 each Level: 7-12

This is a consumer guide to the production and use of electricity in Wisconsin. It also contains conservation tips and a discussion of future energy sources.

ELUSIVE BONANZA (1970)

Author: C. Welles

E. P. Dutton, 2 Park Avenue, New York, NY 10016

Price: \$7.95

Level: 12

This is the story of problems related to recovering fossil fuel from oil shale in the Western U.S. It combines a business-like approach with adventure.

ENERGY AND ENVIRONMENT

Author: G. O. Robinette

Kendall-Hunt Publ. Co., 2460 Kerper Blvd., Dubuque, IA 52001

Price: \$11.40

Level: 10-12

Robinette shows how landscape architecture can work with electric utilities to enhance and preserve the environment. He offers practical solutions to the problems of energy output and environmental preservation.

ENERGY BOOK 1 (1975), ENERGY BOOK 2 (1977)

Author: John Prenis

Running Press, 38 South Nineteenth St., Philadelphia, PA 19103

Price: \$4.00 Book 1

\$5.00 Book 2

Level: 7-12

These books can be used separately or together. Both are anthologies covering alternate sources of energy written with the layperson in mind.

Background Reading Material

THE ENERGY CONTROVERSY

Author: F. H. Schmidt
Albion Publishing Co., 1736 Stockton St.,
San Francisco, CA 94133
Price: \$4.95 Level: 10-12
This book analyzes various problems involved in the use of nuclear power. It is brief and clearly written.

ENERGY, ECOLOGY, ECONOMY

Author: Gerald Garvey
W. W. Norton & Co., Inc., 500 Fifth Ave.,
New York, NY 10036
Price: \$3.75 (paperback) Level: 12
In this study Mr. Garvey develops a framework for assessing the long-term destruction caused during the production, transportation, and conversion of fuel to meet our growing demands for energy. It is useful as a basis for discussion or for research or special study.

ENERGY, ECONOMIC GROWTH, & THE ENVIRONMENT (1972)

Editor: Sam H. Schurr
John Hopkins University Press, Baltimore, MD 21218
Price: \$12.00 (hardcover) Level: 12
\$ 2.95 (softcover)
Authorities with different perspectives consider assuring future energy supplies and protecting the natural environment. The ideas are presented in a nontechnical manner.

ENERGY: DEMAND VERSUS SUPPLY (1975)

Editor: Diana Reische
H. W. Wilson Company, 950 University Avenue,
Bronx, NY 10452
Price: \$5.75 Level: 12
This publication is a compilation of newspaper and magazine articles. It deals with the energy shortage, alternative energy sources, national policy, and consumer options.

Background Reading Material

ENERGY ESSAYS

Editor: Malcolm Wells

Edmund Scientific, Inc., 7778 Edscorp Building,
Barrington, NJ 08007

Price: \$5.95

Level: 6-12

This illustrated book explores the possibilities for alternative sources of energy. It includes contributions from many noted authorities in the fields of environmental management and energy theory.

ENERGY FOR SURVIVAL: THE ALTERNATIVE TO EXTINCTION (1974)

Author: W. Clark

Anchor Press, Division of Doubleday & Company,
245 Park Avenue, New York, NY 10017

Price: \$4.95 (softbound)

Level: 10-12

This book is a survey of energy crisis issues. The emphasis is on the human need for energy to survive and, hence, the necessity of finding new sources of energy.

ENERGY IN THE WORLD OF THE FUTURE

Author: H. Hellman

M. Evans & Co., Inc., 261 E. 49th St., New York, NY 10017

Price: \$6.95

Level: 7-12

This book is an examination of present and future energy sources. It is a nontechnical, useable presentation of important ideas.

ENERGY: ITS PAST, ITS PRESENT, ITS FUTURE

Author: Martin J. Gutnik

Children's Press, 1224 West Van Buren Street,
Chicago, IL 60607

Price: \$5.50

Level: 4

Energy and the way man has harnessed its power have influenced life since prehistoric times. The book deals with how people will live in the future and concludes that the quality of life will be determined by how energy is conserved and by the discovery and use of new energy sources.

Background Reading Material

THE ENERGY-SAVING GUIDEBOOK (1974)

Author: George S. Springer

Technomic Publishing Co., Inc., 265 Post Road West,
Westport, CT 06880

Price: \$8.50

Level: 10-12

Whatever your lifestyle, you can benefit from increasing the efficiency of your energy consumption. Specific data are offered showing the results you will get by following suggested steps.

ENERGY TAXES & SUBSIDIES (Energy Policy Project of the Ford Foundation)

Author: Gerard Brannon

Ballinger Publishing Co., 17 Dunster St., Harvard Square,
Cambridge, MA 02138

Price: \$15.00 (hardbound)

\$ 5.95 (paperback)

Level: 11-12

This book is an introduction to taxation and subsidies on produced energy. It includes suggestions for changing the current tax framework.

ENERGY: THE CASE FOR CONSERVATION (1976)

Author: Denis Hayes

Worldwatch Institute, 1776 Massachusetts Ave. NW,
Washington, DC 20036

Price: \$2.00

Level: 9-12

Hayes reports that more than half the energy consumed in the U.S. is wasted. He concludes that energy obtained through conservation in transportation systems, food production, waste disposal, and the heating and lighting of buildings could meet all of the country's energy needs for the next twenty-five years.

ENERGY: USE, CONSERVATION, AND SUPPLY

AAAS Publication Sales, Dept. Q, 1515 Massachusetts Ave. NW,
Washington, DC 20005

Price: \$12.95 (hardbound)

\$ 4.95 (paperback)

Level: 11-12

This is a collection of articles giving a general overview of the energy problem. It is suitable for individual use on practical problems.

Background Reading Material

ENERGY WE CAN LIVE WITH

Editor: Daniel Wallace
Rodale Press, 33 E. Minor Street, Emmaus, PA 18049
Price: \$3.95 (paperback) Level: 11-12
Wallace analyzes the potentials of most alternative energy sources: solar, wind, and methane, and explores some obscure sources like alcohol, compost, and pedal power. He proposes solutions by working with nature instead of against it.

THE ENVIRONMENT: A HUMAN CRISIS

Author: M. D. Pilburn
Hayden Book Co., Inc., 50 Errex St.,
Rochelle Park, NJ 07662
Price: \$3.72 Level: 10-12
Pilburn discusses various aspects of current environmental problems. He includes overpopulation, land use, energy consumption, and nuclear energy issues.

ENVIRONMENTAL COST OF ELECTRIC POWER (1970)

Author: D. E. Abrahamson
Scientists' Institute for Public Information,
355 Lexington Ave., New York, NY 10017
Price: \$1.00 Level: 7-12
Power and energy are discussed in relation to public needs. This information is provided by Dean E. Abrahamson, M.D., Ph. D., of the University of Minnesota.

THE ENVIRONMENTAL PRICE OF ENERGY

Author: Alfred J. VanTassel
Lexington Books, D. C. Heath and Co., 125 Spring Street,
Lexington, MA 02173
Price: \$21.00 Level: 9-12
This report examines how environmentally wasteful measures can be converted into energy-producing ones. This is a well-balanced presentation of ongoing work in the environmental area.

Background Reading Material

EXPLORING ENERGY CHOICES

The Ford Foundation, 320 East 43rd Street,
New York, NY 10017

Price: \$.75 Level: 8-12
(50 copies or more/\$.60 each)

This is an overview of the energy crisis. It includes possible alternatives and their environmental impact.

FIRST BOOK OF SOLAR ENERGY (1968)

Author: J. Hoke
Franklin Watts, Inc., 730 Fifth Avenue,
New York, NY 10019

Price: \$4.90 Level: 4-6

This is an introduction to energy from the sun. The author explains how silicon cells work, how the current is tapped, and what forms solar energy can take.

FIRST ELECTRICAL BOOK FOR BOYS (1963)

Author: A. P. Morgan
Charles Scribner's Sons, 597 Fifth Avenue,
New York, NY 10017

Price: \$5.95 Level: 5-9

The book is a nontechnical introduction to electricity, what it is, and what it can do. It is useful for supplemental reading and individual activities.

FUELS, MINERALS, & HUMAN SURVIVAL

Author: C. B. Reed
Ann Arbor Science Publishers, Inc., P. O. Box 1425,
Ann Arbor, MI 48106

Price: \$12.50 Level: 11-12

Reed presents an inquiry into the future of our industrial society. His emphasis is on alternative energy systems that are available now and others that may be available in the future.

Background Reading Material

GREAT ENERGY SEARCH (1974)

Author: E. Israel

Julian Messner Division, Simon & Schuster,
Simon & Schuster Bldg., 1230 Ave. of the Americas,
New York, NY 10020

Price: \$5.29

Level: 4-6

All sources of energy or potential energy are discussed in language young readers can understand. This helps make them aware of the energy crisis that faces us all.

HARNESSING THE SUN: A PRACTICAL NO-NONSENSE APPROACH TO HOME SOLAR HEATING

Author: John H. Keyes

Morgan & Morgan, Inc., 145 Palisade Street,
Dobbs Ferry, NY 10522

Price: \$3.95

Level: 11-12

This describes practical methods for using the sun as a home heating source. It is suitable for projects, research, or as teacher background material.

HEAT AND ITS CONTROL

Johns-Manville Sales Corporation, Drawer 17-L,
Denver, CO 80217

Price: free

Level: 4-12

This is a booklet on heat transfer and insulation. It is suitable for classroom use and is in non-technical language.

HERE COMES THE SUN, 1981: SOLAR HEATED MULTI-FAMILY HOUSING (1975)

Joint Venture, Inc., 1406 Pearl St., Boulder, CO 80302

Price: \$12.00

Level: 9-12

A step-by-step process details solar-powered mechanical systems. Emphasis is on energy conservation measures through multi-family housing concepts.

Background Reading Material

HIDDEN WASTE: POTENTIALS FOR ENERGY CONSERVATION

Author: D. B. Large
Conservation Foundation, 1717 Massachusetts Ave., NW,
Washington, DC 20036
Price: \$4.00 Level: 10-12
This is a discussion of the use of energy in homes, business, transportation, and factories. It offers suggestions for efficient and productive energy use.

HISTORY OF NATURAL GAS

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209
Price: \$.06 each (free to teachers) Level: 3-6
This booklet is in comic book format. It tells the story of the gas industry past, present, and future.

HOME BUILT, WIND-GENERATED ELECTRICITY HANDBOOK

Author: M. Hackleman
Peace Press, 3828 Willat Ave., Culver City, CA 90230
Price: \$7.95 Level: 8-12
This book explains the mechanical and technical details of do-it-yourself wind generated electricity. It is written for the layperson.

HOW AND WHY WONDER BOOK OF ATOMIC ENERGY (1970)

Author: D. Barr
Grosset and Dunlap, Inc., Publishers, 51 Madison Ave.,
New York, NY 10010
Price: \$.79 Level: 4-6
This is a brief history of one development of atomic energy. It focuses on atomic energy's significance in today's world and its future uses.

Background Reading Material

HOW TO CONSERVE ENERGY AT HOME (1977)

C. L. Bete Co., Inc., 45 Federal St., Greenfield, MA 01301

Price: \$.50 each or discount on 50 or more

Level: 7-12

This booklet gives tips on saving energy in the home. It illustrates the proper use of heating and cooling units.

HOW TO CONVERT YOUR AUTO TO PROPANE OR METHANE: A GUIDE FOR THE COMPLETE IDIOT

Author: J. Friedberg

Arrakis Propane Conversions, Leslie, AK 76245

Price: \$2.00

Level: 7-12

Friedberg explains how to convert any engine to use methane or propane. Many money-saving tips are included.

HYDROCARBON CIVILIZATION

Author: E. Hessler

Minnesota Environmental Sciences Foundation, Inc.,

5400 Glenwood Ave., Minneapolis, MN 55422

Price: \$5.50

Level: 10-12

This book is designed to help students identify their own interests in energy, become aware of energy options, and begin to generate images of the future. It stresses how people think about energy.

INVESTOR-OWNED UTILITIES (1977)

C. L. Bete Co., Inc., 45 Federal St., Greenfield, MA 01301

Price: \$.50 (quantity discount available)

Level: 7-12

This booklet describes a public utility. It explains how it is regulated and why the cost of providing electricity is rising.

Background Reading Material

KEEPING WARM WITH LESS FUEL

Hartung Product Design Service, Dean Bldg.,
655 Main St., East Greenwich, RI 02818

Price: \$1.00 per single copy; substantial discounts
for quantity orders Level: 5-12

This booklet deals with innovative ways of maintaining personal comfort with lower home temperature. It is useful as a basis for discussion of conservation and energy issues or for individual projects.

LAND, ENERGY, AND TRANSPORTATION: THE URBAN CONSERVATION VIEW

National League of Cities, 1620 Eye St., NW,
Washington, DC 20006

Price: \$3.00 Level: 11-12

This report contains statements by city officials and prominent experts on the interrelationships among land, energy, and transportation. Programs that cities have developed to conserve energy are described.

THE LIMITS TO GROWTH (1974)

Author: Donella Meadows et al.

Universe Books, 381 Park Avenue South,
New York, NY 10016

Price: \$7.50 (clothbound)
\$3.50 (paperback)

Level: 11-12

This book is the outgrowth of a study of the implications of continued worldwide growth. It provides a model for planetary planning.

THE LIQUID METAL FAST BREEDER REACTOR: AN ENVIRONMENTAL AND ECONOMIC CRITIQUE (1974)

Author: Thomas B. Cochran

Johns Hopkins University Press, Baltimore, MD 21218

Price: \$6.95 Level: 12

Cochran examines the major problems facing the LMFBR, especially as they affect the environment. The book is useful as background material or for individual study.

Background Reading Material

LNG FROM ALGERIA: A DYNAMIC ANSWER TO AMERICA'S SHRINKING GAS SUPPLIES

The El Paso Company, P.O. Box 2185, Houston, TX 77001
Price: free (available in limited quantities)

Level: 8-12

This booklet discusses the need to develop new energy sources. It centers on the project to bring liquified natural gas to this country from Algeria via supertankers.

LOW-COST ENERGY-EFFICIENT SHELTER

Editor: Eugene Eccli
Rodale Press, 33 E. Minor St., Emmaus, PA 18049
Price: \$10.95 (hardcover)

\$ 5.95 (paperback)

Level: 11-12

Eccli shows how to cut utility bills by up to 63% by correcting energy-wasting areas in the home. He includes sections on lowering first costs of a home and plans for fourteen low-cost, energy-efficient homes.

MOTHER EARTH NEWS HANDBOOK OF HOMEMADE POWER

Author: John Shuttleworth
Bantam Books, Inc., 666 Fifth Ave., New York, NY 10019
Price: \$2.25

Level: 7-12

This is a handbook of alternative energy information. Innovative ways to get around the power problem are the theme.

MYTHS & REALITIES OF THE ENERGY SHORTAGE (1974)

Author: R. E. Storms
Exposition Press, Inc., 900 So. Oyster Bay Rd.,
Hicksville, NY 11801

Price: \$6.00

Level: 9-12

This book gives background information on the energy crisis and tells how to deal with it. It urges a search by scientists for new energy sources.

Background Reading Material

NATIONAL POWER SURVEY: ENERGY CONSERVATION

Federal Energy Regulatory Commission,
Office of Public Information, 825 N. Capitol St. NE,
Washington, D.C. 20426

Price: free Level: 10-12
(single copies only)

This report was prepared by the Task Force on Conservation of Energy. It contains recommendations for a national conservation policy.

NATURAL GAS SAFETY (1977)

C. L. Bete Co., Inc., 45 Federal St. Greenfield, MS 01301
Price: \$.50 Level: 7-12

(quantity discounts available)

This booklet tells how to use gas properly. It covers appliance safety rules and what to do if a gas leak develops.

NATURAL GAS SERVES OUR COMMUNITY

Author: B. Cross
American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$2.00 (free to teachers) Level: 2-3

This is a cutout book of 28 pictures depicting the movement of gas from the field to the community. It focuses on the many uses of gas.

NEW LOW-COST SOURCES OF ENERGY FOR THE HOME (1975)

Author: P. Clegg
Garden Way Publishing, Charlotte, VT 05445

Price: \$7.95 Level: 10-12

This book shows how solar collectors, wind generators, water turbines, and other systems work and how to plan, design, and install typical systems. It is a thorough overview of today's alternate energy systems.

Background Reading Material

NEWSLETTER: ENERGY CONSERVATION

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$.10 (free for teachers) Level: 7-10

Energy Conservation notes the routine decisions affecting conservation. It deals specifically with obtaining the basic essentials of food, shelter, clothing, and transportation.

NON-NUCLEAR FUTURES (1975)

Author: A. B. Lovins

Friends of the Earth, 124 Spear, San Francisco, CA 94105

Price: \$6.95 Level: 9-12

This book is a review of nuclear economics. It discusses the cost of building and maintaining nuclear power systems.

NUCLEAR ENERGY

Author: Raymond Murray

Pergamon Press, Maxwell House, Fairview Park,
Elmsford, NY 10523

Price: \$9.00 Level: 10-12

This book introduces the concepts, systems, and benefits of nuclear processes. It includes, in nontechnical language, basic information on nuclear power plants which generate electricity.

NUCLEAR POWER AND THE ENVIRONMENT

American Nuclear Society, 555 North Kensington Ave.,
La Grange Park, IL 60525

Price: 1975 edition - \$10.00 per 100 Level: 9-12
1976 edition - \$ 4.00 each (quantity discounts available)
1977 edition - \$.50 each (quantity discounts available)

This book poses a wide range of questions concerning the environmental impact of nuclear power and gives answers that generally support the use of nuclear power. It is suitable for classroom use as information or as a basis for discussion.

Background Reading Material

NUCLEAR POWER AND THE PUBLIC

Editor: H. Forman
University of Minnesota Press, 2037 University Ave., SE
Minneapolis, MN 55455

Price: \$10.00

Level: 10-12

This book deals with basic issues in the public controversy over nuclear power. The information provides a neutral forum for consideration of issues and formulation of public policies.

NUCLEAR POWER IN INDUSTRY

Author: L. Meyer
American Technology Soc., 5608 Story Island Ave.,
Chicago, IL 60637

Price: \$5.25

Level: 7-12

This book is for anyone who works or lives in areas where nuclear materials are utilized. The text presents essential knowledge concerning nuclear matter and the conditions under which it may be hazardous or nonhazardous.

NUCLEAR SCIENCE AND SOCIETY (1974)

Author: Bernard L. Cohen
Anchor Press, Division of Doubleday & Co., Inc.,
245 Park Ave., New York City, NY 10017

Price: \$2.95

Level: 10-12

This book deals with the possibility of attaining energy self-sufficiency. It also explores working toward a sane, internationally controlled nuclear policy.

NUCLEAR THEFT: RISKS AND SAFEGUARDS (Energy Policy Project of The Ford Foundation)

Authors: Mason Willrich, Theodore Taylor
Ballinger Publishing Co., 17 Dunster St.,
Howard Square, Cambridge, MA 02138

Price: \$16.50

Level: 11-12

This book is a nontechnical discussion of the problem of preventing unlawful nuclear proliferation. It contains recommendations.

Background Reading Material

OCEANS IN TOMORROW'S WORLD: HOW CAN WE USE AND PROTECT THEM? (1972)

Author: D. R. Michaelson
Julian Messner Division, Simon & Schuster,
Simon & Schuster Bldg., 1230 Ave. of the Americas,
New York City, NY 10010

Price: \$5.29

Level: 5-9

Michaelson gives a summary of current and projected methods of using the oceans. Included are methods for recovering drinking water, food, minerals, oil, and energy from the oceans.

OFFSHORE OIL SEARCH

Author: Ralph C. Deans
Congressional Quarterly, Editorial Research Reports,
1414 22nd St. NW, Washington, DC 20037

Price: free

Level: 10-12

This booklet gives information concerning offshore oil drilling. Included are concerns over energy and pollution, jurisdiction over seabed development, and new interest in offshore drilling.

OIL FROM PROSPECT TO PIPELINE

Author: Robert R. Wheeler and Maurine Whited
Gulf Publishing Co., 3301 Allen Parkway, Houston, TX 77001
Price: \$6.95

Level: 10-12

This book presents, in nontechnical terms, the complicated operations involved in producing oil. It documents many recent changes in the oil industry.

ONLY SILLY PEOPLE WASTE (1976)

Author: N. Smaridge
Abingdon Press, 201 Eighth Ave. South, Nashville, TN 37202
Price: \$4.25 each

Level: K-4

This is an elementary book of poems on the everyday wasteful habits of children. Black and white illustrations are included.

Background Reading Material

OTHER HOMES AND GARBAGE

Authors: Jim Leckie, Gil Masters, Harry Whitehouse,
and Lily Young

Sierra Club Books, C/O Charles Scribner's Sons,
597 Fifth Avenue, New York City, NY 10017

Price: \$9.95 Level: 10-12

This book is a guide to the study, design, and construction of alternative housing or renovation. The focus is on reducing demands on the environment.

OUTLOOK FOR ENERGY IN THE U.S. TO 1985

Author: J. G. Winger

Chase Manhattan Bank, Attn: Energy Economics Dept.,
One Chase Plaza, New York, NY 10015

Price: free (1 copy only per order) Level: 10-12

Written before the oil embargo, this booklet discusses the possibility of shortages, sources of energy, demand, markets, and supplies. The discussion is accompanied by charts.

PERSPECTIVE ON POWER (Energy Policy Project of the Ford Foundation)

Authors: Edward Berlin, Charles J. Cicchetti,
and William Gillen

Ballinger Publishing Co., 17 Dunster St., Harvard Square,
Cambridge, MA 02138

Price: \$15.00 (hardbound) Level: 11-12
\$ 5.00 (paperback)

This book is a study of the regulation and pricing of electric power. It offers possibilities for changing the framework of the electric power industry.

PERSPECTIVE ON ENERGY: ISSUES, IDEAS, & ENVIRONMENTAL DILEMMAS (1975)

Author: Lon C. Ruedisili

Oxford University Press, 16-00 Politt Drive,
Fair Lawn, NJ 07410

Price: \$6.50 Level: 9-12

This book explores the complexity of rapidly changing energy technology. The diversity of opinion on how to solve energy problems and the environmental costs of various alternatives are included.

Background Reading Material

PLANNER'S HANDBOOK ON ENERGY

State Energy Office, 108 Collins Building,
Tallahassee,

Price: \$4.50 (available in Florida only) Level: 7-12

This book contains suggestions for coping with energy shortages and cost increases. It emphasizes residential uses of energy.

POWER OVER PEOPLE (1973)

Author: L. B. Young

Oxford University Press, 16-00 Pollitt Drive,
Fair Lawn, NJ 07410

Price: \$9.95 (clothbound)

Level: 9-12

\$3.50 (paperback)

Based on scientific research, this book reveals the extent to which extremely high voltage power lines will impose danger and discomfort on the people living near them. It emphasizes the need to reverse the underlying priorities of our technocratic society.

PRODUCING YOUR OWN POWER

Editor: Carol Hupping Stover

Rodale Press, 33 E. Minor Street, Emmaus, PA 18049

Price: \$8.95 (hardcover)

Level: 11-12

This book explains how to harness energy from the sun, wind, water, wood, and organic wastes. It contains suggestions useful for classroom or individual projects.

PROFITABLE ENERGY MANAGEMENT FOR RETAILERS AND SHOPPING CENTERS (1975)

Author: John H. Fulweiller

Labhar-Friedman Books, 425 Park Ave., New York, NY 10022

Price: \$13.50

Level: 12

This book is an analysis of energy problems as they relate to businesses. It provides advice and techniques for more efficient use of energy.

Background Reading Material

PROGRESS & THE ENVIRONMENT: WATER & AIR POLLUTION (1973)

Author: J. P. Shaver
Houghton Mifflin Company, Two Park Street,
Boston, MA 02107

Price: \$2.16

Level: 7-12

This book exposes students to important issues related to pollution. It also assists them in thinking clearly about those issues.

RACE FOR ELECTRIC POWER (1972)

Author: J. Grey
Westminster Press, 906 Witherspoon Building,
Philadelphia, PA 19107

Price: \$5.95

Level: 5-9

This is an illustrated book with diagrams and photographs. It explains what electricity is and explores the potential for nuclear power generation of electricity.

RADICAL TECHNOLOGY

Author: G. Boyle
Pantheon Books, 201 E. 50th St., New York, NY 10022

Price: \$5.95

Level: 10-12

This book is concerned with the production of food, energy, and shelter. Energy conservation is endorsed, emphasizing a return to humanized production.

RESOURCES IN AMERICA'S FUTURE: PATTERNS OF REQUIREMENTS AVAILABILITIES 1960-2000 (1963)

Authors: H. H. Landesburg, L. L. Fischman, J. L. Fisher
Johns Hopkins University Press, Baltimore, MD 21218

Price: \$25.00

Level: 12

This book gives systematic projections of future demand for resources and resource products. It is valuable for the study of methods and for details on particular products.

Background Reading Material

SCARCITY & GROWTH: THE ECONOMICS OF NATURAL RESOURCE AVAILABILITY (1963)

Authors: Harold T. Barnett and Chandler Morse
Johns Hopkins University Press, Baltimore, MD 21218
Price: \$13.50 (hardcover) Level: 12
\$ 3.95 (paperback)

This book presents an analysis of classic and conservationist scarcity theory. It is useful as background for class discussion or individual study.

THE SEARCH FOR ENERGY (1974)

Author: Don Dwiggins
Children's Press, 1224 West Van Buren Street,
Chicago, IL 60607
Price: \$5.50 Level: 7

Dwiggins discusses energy sources, explaining what they are, how they work, and their potential for the future of mankind. He includes direct and indirect solar energy, tidal, and geothermal energy.

SOLAR ENERGY: A PROMISING ALTERNATIVE (1976)

Author: K. W. Boer
National Audubon Society, Educational Services,
950 Third Avenue, New York, NY 10022
Price: \$.35 Level: 7-12
(available in quantities of 30 or more)

This six-page bulletin has pictures describing the huge amount of energy alternatives that could be used to supplement conventional energy sources. It includes a recommended reading list.

SOLAR ENERGY: SELECTED REPRINTS

American Association of Physics Teachers, Graduate Physics Bldg.,
SUNY at Stony Brook, Stony Brook, NY 11794
Price: \$7.00 Level: 12

This book contains reprints of articles on the use of solar energy. It is suitable for independent study, research, or for teacher background material.

Background Reading Material

SOLAR ENERGY: TECHNOLOGY & APPLICATIONS

Author: J. Richard Williams
Ann Arbor Science Publishers, Inc., P. O. Box 1425,
Ann Arbor, MI 48106
Price: \$9.95 (hardcover) Level: 10-12
\$6.95 (softcover)

This is a how-to-do-it book that includes recent research breakthroughs and technological improvements. It gives basic information on how to build a home solar heating unit, including material costs.

SOLAR HEATING SYSTEMS

Author: J. Sands
Kalwell Corp., Solar Components Division, Box 237,
Manchester, NH 03105
Price: \$3.00 Level: 10-12
This is a short, general guide to solar systems. Ideas are presented in a nontechnical manner.

SURVIVAL 2001: SCENARIO FROM THE FUTURE (1975)

Authors: H. E. Voegeli and J. J. Tarrant
Van Nostrand Reinhold, Division of Litton Ed. Publ.,
450 W. 33rd Street, New York, NY 10001
Price: \$5.95 Level: 10-12
Energy possibilities of the future are explored and are shown to be useful now. The use of the earth's internal heat and electricity production from ocean tides and winds are advocated.

TECHNOLOGY: WHALE OIL, ARAB OIL, & NO OIL

Gould, Inc., 10 Gould Center, Rolling Meadows, IL 60008
Price: Free Level: 10-12
This report advocates dealing with the energy crisis through technology. It discusses the need for new utilization patterns and research and development on energy.

Background Reading Material

TIME TO CHOOSE (Energy Policy Project of The Ford Foundation)

Ballinger Publishing Company, 17 Dunster Street,
Harvard Square, Cambridge, MA 02138

Price: \$16.50 (hardbound) Level: 11-12
\$ 6.95 (paperback)

This book is a general introduction to energy problems as they affect all aspects of American life. It contains recommendations for managing future needs and supplies.

U. S. ENERGY POLICIES: AN AGENDA FOR RESEARCH (1969)

Resources for the Future, 1755 Massachusetts Ave. NW,
Washington, DC 20036

Price: \$3.50 (paperback) Level: 12

This book is a thorough examination of U.S. energy policy and proposals for new research. It is useful for individual research or study.

U. S. ENERGY POLICY - A PRIMER (1974)

Author: Edward J. Mitchell
American Enterprise Institute for Public Policy Research,
1150 Seventeenth Street NW, Washington, DC 20036

Price: \$3.00 Level: 10-12
(quantity discount available)

This book is written for the lay person. It is a general introduction to the scope and thrust of Federal energy policy.

WHAT EVERYONE SHOULD KNOW ABOUT ELECTRICITY (1977)

Channing L. Bete Co., Inc., 45 Federal Street,
Greenfield, MA 01301

Price: \$.50 Level: 5-12
(quantity discount available)

This booklet is a practical guide to circuits, fuse boxes, and other home electrical equipment. It explains wattage, the electric bill, and much more.

Background Reading Material

WHAT IS ENERGY? PEOPLE & TECHNOLOGY

Education Dev. Center, 55 Chapel St., Newton, MA 02160

Price: \$.60 each

Level: 6-9

This booklet examines sources of energy and the relationship between energy and technology. Also covered are the energy problems confronting the world today.

THE WHOLE EARTH HAPPENS AS YOU DO: THE BALANCE OF LIFE

Authors: David Archbold and Noel McInnis

Environments for Learning, P. O. Box 3178, Aspen, CO 81611

Price: \$1.00

Level: 9-12

(quantity discount available)

This book presents a frame of reference that unifies our perspective on both natural and human systems. This enables many problems of contemporary civilization to be more clearly understood.

WIND & WINDSPINNERS

Author: M. Hackleman

Peace Press, 3828 Willat Ave, Culver City, CA 90230

Price: \$7.95

Level: 8-12

This is a manual on the basics of wind-to-electricity energy conversion. Virtually every facet of wind power is presented in a technically competent but understandable manner.

WIND ENERGY BIBLIOGRAPHY (1976)

Author: B. Wolfe

Windworks, Box 329, Route 3, Mukwonago, WI 53149

Price: \$3.00

Level: 9-12

This is a compilation of books, articles, and papers dealing with wind energy. It also covers related alternative energy sources.

Background Reading Material

WIND POWER

Author: Daniel Simmons
Noyes Data Corp., Mill Rd. at Grand Ave.,
Park Ridge, NJ 07656
Price: \$24.00 Level: 12
Simmons describes the technology and economics of wind-powered energy. He covers development of various systems both domestically and abroad.

WINDMILLS (1975)

Author: Hayter Preston
Gale Research Company, Book Tower, Detroit, MI 48226
Price: \$14.00 Level: 9-12
Windmills gives a history of windpower. It includes descriptions of some old European windmills with illustrations that bring out the beauty of these machines as well as their utilitarian purposes.

WOOD HEAT

Author: John Vivian
Rodale Press, 33 E. Minor Street, Emmaus, PA 18049
Price: \$8.95 Level: 11-12
This is a nontechnical book on the use of wood stoves, furnaces, and heaters. It shows how to install, maintain, and operate wood heaters for greatest efficiency.

WORLD ENERGY STRATEGIES: FACTS, ISSUES, & OPTIONS (1974)

Author: Amory Lovins
Friends of the Earth, 124 Spear, San Francisco, CA 94105
Price: \$5.95 Level: 9-12
A critical review of the world fuel resources is included in this book. It places them in perspective with real world energy needs, costs, and technical difficulties.

YOUNG PEOPLE'S BOOK OF ATOMIC ENERGY (1967)

Author: R. D. Potter
Dodd, Mead & Co., Inc., 79 Madison Ave., New York, NY 10016
Price: \$4.50 Level: 7-9
This book is a nontechnical introduction to atomic energy. Photographs and drawings are used in the explanations.

I. MEDIA

B. Books

2. Textbooks

ALASKA & THE ESKIMOS

Allyn & Bacon, Inc., 470 Atlantic Avenue,
Boston, MA 02210

Price: \$3.21 (pupil text) Level: 1-3
\$3.21 (teacher's guide)

This book is an elementary social science text with a teacher's guide suggesting many learning activities. It includes an introductory study of community organization and the relationship between a community and its environment.

BIOLOGICAL SCIENCE, AN ECOLOGICAL APPROACH (Third Edition)

Rand McNally & Co., P. O. Box 7600, Chicago, IL 60680
Price: \$10.89 Level: 9-12

This text emphasizes environmental concerns with laboratory investigations woven in. Inquiry, observation, and experimentation prompt students to adopt a scientific view of the world around them.

CHOICES & DECISIONS: ECONOMICS & SOCIETY

Allyn & Bacon, Inc., 470 Atlantic Avenue,
Boston, MA 02210

Price: \$4.86 (student text) Level: 6-8
\$3.45 (teacher's guide)

This is one part of a series called The Challenges of Our Times which examines recent and contemporary history, including world and domestic developments. The teacher's guide has suggested activities.

COAL: ENERGY & CRISIS

Author: L. D. Chaffin
Harvey House, Division of E. M. Hale & Company,
20 Waterside Plaza, New York, NY 10010

Price: \$3.99 Level: 3-5

This is an introduction to the role of coal in the current energy crisis. It is designed to facilitate inquiry and discussion.

Textbooks

ENERGY: A PHYSICAL SCIENCE

Editor: P. E. Brandwein
Harcourt, Brace, Jovanovich, Inc., 757 Third Avenue,
New York, NY 10017

Price: \$8.70

Level: 8-10

This text considers the major forms of energy individually. The metric system is used throughout and stress is on the development of laboratory investigations and the interpretation of data from these investigations.

ENERGY & ECOLOGY (1975)

The Reading Laboratory, Inc., 55 Day Street,
South Norwalk, CT 06854

Price: \$ 2.25 (each)

Level: 5-9

\$49.50 (set of 25)

Energy and Ecology utilizes ten specially edited news service articles which explore selected facets of our energy-ecology crisis. Special exercises are included that develop reading comprehension, critical reading skills, and vocabulary.

ENERGY & INERTIA

Author: H. Hellman
M. Evans & Co., Inc., 216 E. 49th St., New York, NY 10017
Price: \$3.95

Level: 2-5

Questions regarding energy forms are clarified in this text. The law of inertia is explained in terms of everyday activities.

ENERGY & THE FUTURE

Authors: Allen Hammond, William Metz, Thomas Maugh II
AAAS Publication Sales, Dept. Q, 1515 Massachusetts Ave. NW,
Washington, DC 20005

Price: \$9.95 (hardcover)

Level: 11-12

\$4.95 (paperback)

This book surveys the scientific and technological basis of the energy dilemma. It discusses environmental issues, new energy sources, research priorities, and energy policy.

Textbooks

ENERGY CRISIS/1969-77 (3 Volumes)

Facts on File, 119 W. 57th Street, New York, NY 10019

Price: \$31.95 (three-volume set) Level: 11-12

\$11.95 (Volume 1)

\$10.95 (Volume 2)

\$11.95 (Volume 3)

This is a survey of the development of the energy crisis. Included are historical perspectives, federal proposals, and descriptions of research on alternate power sources.

ENERGY CRISIS: DANGER & OPPORTUNITY (1974)

West Publishing Company, 50 W. Kellogg Boulevard,

P. O. Box 3526, St. Paul, MN 55165

Price: \$13.95 Level: 11-12

In this text, danger and opportunity are discussed in relation to the energy crisis. Ten of the nation's energy experts cover areas vital to an understanding of the energy crisis and its ramifications.

ENERGY FROM SOURCE TO USE (1975)

Editor: Howard S. Stoker

Scott, Foresman & Company, 11310 Gemini Lane,

Dallas, TX 75229

Price: \$5.95 Level: 11-12

Dealing with the nature of energy and its sources, this text brings together extensive scientific data to provide an account of current and anticipated energy problems. With this data, the contributors explore all current and potential sources of energy, and discuss the origins, reserves, and problems related to their conversion and use.

ENERGY, ORGANIZATION & LIFE (1967)

Author: R. R. Panares

Educational Methods, 500 N. Dearborn Street,

Chicago, IL 60610

Price: \$3.75 Level: 10-12

This textbook explores the physical and chemical basis of living systems. It also reviews the need for energy and then investigates the processes of photosynthesis and respiration that make energy available to living things.

Textbooks

EXPLORING & UNDERSTANDING SERIES: MATTER & ENERGY

Benefic Press, 10300 W. Roosevelt Road,
Westchester, IL 60153

Price: \$3.45

Level: 4-9

This is a series of five books which deal with machines, light, heat, magnetism, and chemistry. The emphasis is on helping students develop skill in scientific inquiry.

FOCUS ON EARTH SCIENCE

Author: M. Bishop

Merrill Publishing Company, 1300 Alum Creek Drive,
Columbus, OH 43216

Price: \$8.40

Level: 7-9

This text is on earth science with chapters on energy-related areas. Included are discussions of mineral fuels, the environment, and the circulation of ocean water.

FOCUS ON PHYSICAL SCIENCE

Author: C. E. Heimler

Merrill Publishing Company, 1300 Alum Creek Drive,
Columbus, OH 43216

Price: \$8.40

Level: 7-9

This is a textbook on physical science. Energy-related chapters are on heat, electricity, radiation, nuclear reactions, and energy technology.

A FOREST-PRODUCTS COMMUNITY: CROSSETT, ARKANSAS

Allyn & Bacon, Inc., 470 Atlantic Avenue,
Boston, MA 02210

Price: \$2.16 (pupil text)

Level: 1-3

\$6.60 (teacher's guide)

This text is part of an elementary social science series which focuses on basic community economic-social interrelationships. The teacher's guide includes suggested activities and covers the entire series.

Textbooks

THE HEAT'S ON

Author: B. M. Siegel

Prentice-Hall, Inc., Children's Book Dept.,

Englewood Cliffs, NJ 07632

Price: \$4.50

Level: 3-7

The Heat's On covers basic concepts of heat and temperature. It is geared to motivate readers to make investigations on their own.

INDUSTRY: PEOPLE & THE MACHINE

Allyn & Bacon, Inc., 470 Atlantic Avenue,

Boston, MA 02210

Price: \$3.90 (student text)

Level: 3-5

\$3.90 (teacher's guide)

This elementary social science text explores roles of specialization, research, and capital investment in the creation of a mass-production, mass-consumption society. The teacher's guide contains suggested activities.

INVESTIGATING THE EARTH (1976)

Houghton-Mifflin Company, Two Park Street,

Boston, MA 02107

Price: \$13.76

Level: 9-12

Investigating the Earth is concerned with our knowledge of the earth and its environment. Laboratory experiences are integrated into the text and are designed to be inquiry oriented.

JUNIOR SCIENCE BOOK OF HEAT (1964)

Author: Rocco V. Feravolo

Garrard Publishing Company, Editorial Offices,

107 Cherry Street, New Canaan, CT 06840

Price: \$3.96

Level: 2-5

This basic primer of heat gives pertinent facts about the subject. The information is reinforced with easy-to-do experiments and illustrations.

Textbooks

LANDS OF THE MIDDLE EAST

Allyn & Bacon, Inc., 470 Atlantic Avenue,
Boston, MA 02210

Price: \$4.68 (student text)
\$4.68 (teacher's guide)

Level: 4-6

This book explores the culture of the Middle East in terms of the significant factors affecting human societies. The teacher's guide includes suggested learning activities.

LET'S FIND OUT ABOUT THE SUN (1975)

Author: Shapp

Franklin Watts, Inc., 730 Fifth Avenue, New York, NY 10019

Price: \$4.90

Level: K-3

This is a full-color text with illustrations. It explains the concept of the earth's movement around the sun and the changing seasons.

MOTION

Author: Legunn

Creative Education, 123 S. Broad St., Mankato, MN 56001

Price: \$5.95

Level: 5-9

With this book the reader is encouraged to do his own thinking and searching. It contains an activity section completely devoted to problem-solving and experiments.

OUR NATURAL RESOURCES (1976)

Authors: H. B. Kircher and P. E. McNall

The Interstate, Printers and Publishers, Inc.,

19-27 North Jackson Street, Danville, IL 61832

Price: \$9.50 (discounts available)

Level: 10-12

This textbook teaches the importance of intelligent resource use and the principles of ecology. It focuses on controlling conflicts of interest which have led to environmental abuse.

Textbooks

PEACEFUL ATOM

Author: B. Kohn
Prentice-Hall, Inc., Children's Book Dept.,
Englewood Cliffs, NJ 07632
Price: \$4.95 Level: 3-7
Peaceful Atom is an introductory book on the atom and atomic energy. The presentation is clear and direct.

PHYSICS, ENERGY & OUR WORLD (1975)

Author: P. E. Highsmith
W. B. Saunders Company, West Washington Square,
Philadelphia, PA 19105
Price: \$15.00 Level: 9-10
This book introduces the basic principles of physics via topics of ready interest to today's student. It requires only a minimal mathematics background since concepts are stressed by pictorial examples rather than through tedious computations.

POWER & ENERGY (1960)

Author: N. Benzer-Koller
Stravon Educational Press, 595 Madison Avenue,
New York, NY 10022
Price: \$4.25 Level: 4-6
This textbook is an exposition of the fundamentals of power and energy. It is illustrated with drawings to facilitate learning.

POWER: MECHANICS OF ENERGY CONTROL

Author: R. C. Bohn
McKnight Publishing Company, P. O. Box 2854,
Bloomington, IL 61701
Price: \$9.03 Level: 8-12
This is a basic text for a beginning power course. It gives students an understanding of how energy is generated and converted to power and how mechanical, fluid, and electrical devices control, transmit, and use power.

Textbooks

RECYCLING & RECLAIMING MUNICIPAL SOLID WASTES

Author: F. R. Jackson
Noyes Data Corporation, Mill Rd. at Grand Ave.,
Park Ridge, NJ 07656

Price: \$24.00

Level: 12

Jackson discusses alternate ways of reclaiming all types of solid wastes. The book is suitable for use as a text or teacher's guide or as a handbook for establishing recycling programs.

A STEEL-MAKING COMMUNITY: PITTSBURGH, PENNSYLVANIA

Allyn & Bacon, Inc., 470 Atlantic Avenue,
Boston, MA 02210

Price: \$2.43 (student text)

Level: 1-3

\$6.60 (teacher's guide)

This is one part of a six-part elementary social science series called American Communities which focuses on basic socio-economic relationships. The teacher's guide includes suggested activities and covers the entire series.

STEM (SPACE-TIME-ENERGY-MATTER) (1977)

Author: V. N. Rockcastle et al.

Addison-Wesley Publ. Co., Reading, MA 01867

Price: \$4.20 (Book 1)

Level: K-6

\$4.77 (Book 2)

\$5.01 (Book 3)

\$5.34 (Book 4)

\$5.52 (Book 5)

\$5.52 (Book 6)

The 1977 edition STEM books offer a new version of the study of space, time, energy, and matter. Features include use of the metric system, emphasis on environmental issues, and learning activities using everyday things.

TECHNOLOGY: PROMISES & PROBLEMS

Allyn & Bacon, Inc., 470 Atlantic Avenue,
Boston, MA 02210

Price: \$4.86 (student text)

Level: 6-8

\$3.45 (teacher's guide)

This is from the series, The Challenges of Our Times, that examines recent and contemporary history, including world and domestic developments. The teacher's guide has suggested activities.

Textbooks

WORLD OF POWER & ENERGY

Author: F. Ross
Lothrop, Lee & Shepard, 105 Madison Avenue,
New York, NY 10016

Price: \$5.95

Level: 6-9

This textbook is a study of energy resources. Included are discussions of where our energy comes from and possible new sources.

YOU & THE ENVIRONMENT (1976)

Houghton-Mifflin Company, Two Park Street,
Boston, MA 02107

Price: \$12.40

Level: 7-9

This is an introductory life science program with an ecological emphasis. The text is written so that students learn about living things as a direct result of their own activities.

I. MEDIA

C. Instructional Materials

1. Curriculum Materials

AIR POLLUTION CHEMISTRY: AN EXPERIMENTER'S SOURCEBOOK

Author: H. Bassow
Hayden Book Co., Inc., 50 Essex St.,
Rochelle Park, NJ 07662

Price: \$4.95

Level: 10-12

This manual is designed to initiate discussion and experimentation in air pollution. It includes sections on environmental balances, the beginning of pollution, current pollution problems, and potentials for the future.

CURRICULUM ACTIVITIES GUIDE TO ELECTRICAL POWER GENERATION & THE ENVIRONMENT

Project KARE, McGinnis Office Bldg., Rt. 73 and Butler Pike,
Blue Bell, PA 19422

Price: \$5.50

Level: 1-12

This unit contains activities written by teachers dealing with energy and the consumer, energy and water pollution, energy and air pollution. Some activities are appropriate for elementary students, others for secondary students.

CURRICULUM RESOURCES FOR ENVIRONMENTAL PROGRESS (Volumes I and II)

ERIC/SMEAC, 1200 Chambers Rd., Columbus, OH 43212

Price: free

Level: 7-12

Volume I contains 225 teaching activities for the study of land use, natural resources allocation and depletion, energy use and conservation, in the fields of fine arts, language arts, science, social studies, and vocational arts. Volume II includes annotations for 5,549 titles that support studies in energy and environmental education.

EARTH SCIENCE CURRICULUM GUIDE

Plano Independent School Dist., 1517 Ave. H, Plano, TX 75074

Price: \$6.00

Level: 7-9

This is part of a larger curriculum guide (levels 6-12). It includes an earth science course outline, text, all materials needed, and activity suggestions.

ELECTRICAL PRODUCTION & POLLUTION CONTROL

Topeka Outdoor Environmental Education Ctr.,
1601 Van Buren, Topeka, KS 66612

Price: \$2.50 (limit 1 copy) Level: 11-12

This guide investigates commercial production of electricity and methods of controlling resultant pollution. It can be used as a supplement to other energy-environment education materials.

ENERGY & ORDER, OR, IF YOU CAN'T TRUST THE LAW OF CONSERVATION OF ENERGY, WHO CAN YOU TRUST?

Author: M. Terry
Friends of the Earth, 124 Spear, San Francisco, CA 94105
Price: \$3.00 Level: 7-12

This is a lesson plan for teaching about energy in the context of a science or civics class. It begins with simple and applicable discussions of entropy, energy uses in the home, city, and industry, and ends with discussions of the social and economic implications of various utility technologies.

ENERGY & YOU

Topeka Outdoor Environmental Education Ctr.,
1601 Van Buren, Topeka, KS 66612

Price: \$2.50 Level: special education

This is a simple introduction to the interaction of humans and their energy needs. It can be used as a supplement to any basic skill material.

ENERGY CONSERVATION: GUIDELINES FOR ACTION

Michigan Association of School Administrators,
421 W. Kalamazoo, Lansing, MI 48933

Price: \$.75 (quantity discount available) Level: K-12

This manual establishes goals and objectives for energy education. It also provides useful examples of teaching materials and procedures at every grade level.

ENERGY, MATTER, & CHANGE: EXCURSIONS INTO PHYSICAL SCIENCE

Author: R. D. Townsend
Scott, Foresman and Co., 11310 Gemini Lane,
Dallas, TX 75229

Price: \$7.98 Level: 7-9

In this guide book, students investigate five major areas of physical science: light, electricity, heat, motion, and chemistry. The program has two major goals: to humanize science for students and to help them arrive at science concepts by experiencing scientific processes.

Curriculum Materials

ENVIRONMENTAL EDUCATION GUIDE, K-12

State Dept. of Education, P. O. Box 6Q,
Richmond, VA 23216

Price: \$1.00

Level: K-12

This is a complete environmental education curriculum guide. It is designed to facilitate the understanding of the complexity of interacting forces in our environment.

ENVIRONMENTAL EDUCATION: GUIDES/BOOKLETS

Rosemarie Hammond, Lee County Schools, Environmental Education,
2055 Central Avenue, Fort Myers, FL 33901

Price: Contact source for information. Level: K-12

Lee County Schools offer a wide range of energy-environmental education materials designed on an activity-inquiry basis. All are teacher-developed and can be applied in any discipline; some material is available in Spanish and French.

FINDING OUT ABOUT MAGNETS

Benefic Press, 10300 W. Roosevelt Road,
Westchester, IL 60153

Price: \$2.85

Level: K-6

This manual is designed to give elementary students the opportunity to investigate basic facts and concepts about magnets. It contains illustrations and simple experiments.

THE GREEN BOX: HUMANISTIC ENVIRONMENTAL EDUCATION (1975)

Humboldt County Superintendent of Schools, P. O. Box 1408,
Eureka, CA 95501

Price: \$40.00 (+ \$2.40 tax in Calif.) Level: K-8

The Green Box is a complete K-8 curriculum for conducting a people-oriented program of environmental discovery -- how we affect it and how it affects us. The activities are designed to be integrated into the teaching of any subject area.

INTERACTION SCIENCE CURRICULUM PROJECT (1975)

Rand McNally & Company, P. O. Box 7600, Chicago, IL 60680

Price: \$8.43

Level: 7

Through laboratory and field investigations, students become involved in examination of social, economic, and aesthetic consequences of the decisions we make. The manual emphasizes an inquiry approach to the interaction of man and the biosphere.

Curriculum Materials

INTERCOM 77: EXPLORATIONS IN THE EMERGENT PRESENT

Intercom, 281 East 18th Street, New York, NY 10003
Price: \$2.50 Level: 8-12
(order under \$6.00 must be prepaid)

Intercom 77 is designed to help students identify key global problems and explore their possible impact today and in the near future. It includes learning activities.

INTERCOM 78: TEACHING INTERDEPENDENCE: EXPLORING GLOBAL CHALLENGES THROUGH DATA

Intercom, 218 East 18th Street, New York, NY 10003
Price: \$1.75 Level: 8-12
(orders under \$6.00 must be prepaid)

Intercom 78 sections work with classroom activities. Students must use data presented in charts, tables, and graphs to examine problems of world interdependence.

INTERCOM 80: AMERICA IN THE WORLD

Intercom, 218 East 18th Street, New York, NY 10003
Price: \$1.75 Level: 8-12
(orders under \$6.00 must be prepaid)

This unit includes readings, data, fictional accounts, and role-playing activities. It explores America's position relative to other nations in regard to politics, economics, and philosophy.

INTERCOM 82: ENVIRONMENTAL ISSUES & THE QUALITY OF LIFE

Intercom, 218 East 18th Street, New York, NY 10003
Price: \$1.75 Level: 8-12
(orders under \$6.00 must be prepaid)

Intercom 82 examines the environment through local, national, and global perspectives. It provides multidisciplinary activities for assessing environmental quality, especially in one's own community.

LESS POWER TO THE PEOPLE: ENVIRONMENTAL ENERGY USE

Environmental Action Coalition, 156 Fifth Ave, Suite 1130,
New York, NY 10010
Price: \$6.50 Level: 4-6

This unit addresses what energy is - why and how we must conserve energy and highlights new sources of energy. The twenty-nine activities and select issues of Eco-News found in the curriculum provide the student with information which is nontechnical and project-oriented.

Curriculum Materials

MATTER & ENERGY IN THE STUDY OF THE EARTH

Griffin-Spalding County School System, P. O. Drawer N,
Griffin, GA 30224 (Note: Available only in Georgia)

Price: Free Level: 9

This is a teacher-developed curriculum unit. Its emphasis is on the structure and composition of the earth and its energy.

MINICOURSES: ENERGY IN LIFE (1975)

W. B. Saunders & Co., West Washington Square,
Philadelphia, PA 19105

Price: \$3.95 Level: 9-10

This introduction to energy permits self-paced instruction with a study guide. It also has tapes on the following topics: the nature of energy, generating and receiving energy, photosynthesis, respiration, utilizing energy, and human energy perceptions.

NATURAL ENERGY WORKBOOK #2

Author: Peter Clark

Visual Purple, P. O. Box 996, Berkeley, CA 94703

Price: \$3.95 Level: 10-12

This is a comprehensive guide that is both a construction manual and workbook. It provides short experiments that illustrate the principles involved in building real energy-saving systems.

NUCLEAR POWER: HOW & WHY?

Dept. of Natural Science - DH - 224, San Jose State Univ.,
San Jose, CA 95192

Price: \$2.00 Level: 10-12

This contains suggested topics, activities, and resources for inclusion in a unit on nuclear power plants. It is applicable to physics, chemistry, or physical science.

PHYSICAL SCIENCE: A PROBLEM SOLVING APPROACH

Author: J. L. Carter et al.

Ginn & Company, P. O. Box 20846, Dallas, TX 75220

Price: \$9.35 Level: 7-9

This is a unit designed to motivate and instruct average and below average students in physical science. It utilizes a laboratory approach.

Curriculum Materials

POWER: INDUSTRIAL EDUCATION CURRICULUM GUIDE

(Special Education Material for the Handicapped/Disadvantaged)

Omaha Public School, Dept. of Vocational & Adult Education,
Omaha, NE 68131

Price: \$2.50

Level: 9-12

This 250-page guide contains topic outlines, objectives, teaching activities, evaluation items, and some student information sheets. It covers energy, mechanical power, fluid power, electrical power, and heat engines.

PROBING THE NATURAL WORLD: CRUSTY PROBLEMS & WHY YOU'RE YOU

Silver Burdett Company, 250 James Street,
Morristown, NJ 07960

Price: \$2.31

Level: 9

This is the third level of a three-year intermediate science program. It is self-paced with emphasis on the interrelationship among life, earth, and space science.

PROJECT I-C-E (Instruction-Curriculum-Environment)

Robert J. Warpinski, Director, Project I-C-E,
1927 Main Street, Green Bay, WI 54301

Price: Contact source for information. Level: K-12

Project I-C-E is a K-12 curriculum and instruction program for environmental education designed to lead students to awareness, recognition, and appreciation of the vital issues shaping environmental attitudes and values. The suggested learning activities can easily be integrated into regular courses of study and the program emphasizing the use of the urban and natural community as an extension of and a reinforcement for classroom activities.

SCIENCE CURRICULUM IMPROVEMENT STUDY (1971)

Rand McNally & Company, P. O. Box 7600, Chicago, IL 60680

Price: \$3.00

Level: 5-6

SCIS develops the scientific literacy of students at the elementary school level. The units in this series are "Communities", "Energy Sources", and "Models: Electric and Magnetic Interactions".

SUGGESTIONS FOR TEACHING ENERGY CONSERVATION IN HOME ECONOMICS

Alabama Dept. of Education, State Office Building,
Montgomery, AL 36130

Price: Free

Level: 9-12

This is designed to aid in developing home-use energy conservation curricula. It contains ideas and techniques for classroom teaching and related activities.

Curriculum Materials

TECHNOLOGY & THE UNITED STATES

Author: C. L. Mitsakos

Curriculum Center, Chelmsford Public Schools,
31 Princeton Street, No. Chelmsford, MA 01863

Price: \$4.00

Level: 4-6

This is a teacher's guide designed to help students analyze the impact of technology on life in different regions in the United States. It contains several valuing activities, simulations, and suggestions for research.

VALUING THE ENVIRONMENT (1974)

Charles T. Vizzini, Project Director, Charlotte-Mecklenburg
Schools, P. O. Box 149, Charlotte, NC 28230

Price: \$3.50

Level: K-6

This interdisciplinary program encourages students to consider alternative solutions to environmental problems. Topics included are plants and animals, water, air, energy, natural resources, land use and aesthetics, and pollution.

THE WORLD AROUND YOU

Conservation Committee, The Garden Club of America,
598 Madison Avenue, New York, NY 10022

Price: 1 copy free

Level: 3-12

(\$1.50 each additional copy)

This is an environmental education guide designed to help educate for survival. It contains activities and experiences that encourage individual inquiry.

I. MEDIA

C. Instructional Materials

2. Teacher Materials

A-B-C'S OF ELECTRICITY (1977)

C. L. Bete Company, Inc., 45 Federal Street,
Greenfield, MA 01301

Price: \$.50 (quantity discount available) Level: 5-12

This pamphlet gives an illustrated explanation of electricity. It also explains how electricity is produced and its service to the public.

ARE WE RUNNING OUT OF NATURAL GAS? (1977)

C. L. Bete Company, Inc., 45 Federal Street,
Greenfield, MA 01301

Price: \$.50 (quantity discount available) Level: 5-12

This booklet provides some reasons for the gas shortage. It also explains ways to increase natural gas supplies.

ATOMIC ENERGY

National Office, Boy Scouts of America,
North Brunswick, NJ 08902

Price: \$.55

Level: 6-12

Atomic Energy is a Merit Badge pamphlet. It is designed to make the Scout-aged youth aware of atomic energy: its production, history, and use.

AUTOMOBILE ENGINES OF TODAY & TOMORROW

Author: I. Stambler
Grosset & Dunlap, Inc., Publishers, 51 Madison Avenue,
New York, NY 10010

Price: \$5.99

Level: 9-12

This is a report of the research now being carried out in automotive design for sports competition as well as for automobiles of the future. It presents developments in pollution-free cars and alternatives to internal combustion engines such as steam, electric motors, gas turbines, and innovative nuclear-powered vehicles.

CONSERVATION OF ENERGY: TEACHER'S ACTIVITY GUIDE

Louisiana State Dept. of Education, P. O. Box 44064,
Baton Rouge, LA 70804 (Note: Available only in LA)

Price: Free (limited supply)

Level: K-12

This guide contains suggested activities for use in energy education curricula. It can also be used to present background material.

Teacher Materials

DEMOCRACY, TRUTH, & COURAGE: STUDIES FOR ENVIRONMENTAL ACTION

Author: T. Tanner

National Audubon Society, Educational Services,

950 Third Avenue, New York, NY 10022

Price: \$24.95 (complete unit)

Level: 10-12

This is a nontechnical presentation of six true cases of citizen action in environmental issues. The teacher's guide contains discussion items, background studies and information, and a bibliography for material from both sides of the controversies.

DISCOVER ENERGY SERIES

Ecology Center of Ann Arbor, 417 Detroit Street,

Ann Arbor, MI 48104

Price: \$10.30

Level: 7-12

There are five individual titles in this series: 1) "What is Energy;" 2) "The Fossil Fuel Story;" 3) "Development of Energy Resources;" 4) "Nuclear Power;" 5) "Energy Options." The series is suitable for curriculum building in science, social studies, or energy-environment education classes.

EARTH, ENGINES, & INGENUITY: HISTORICAL SOURCES OF ENERGY

Multi-Media Production, Box 5097, Stanford, CA 94305

Price: Free

Level: 9-12

This is a guide to the study of an energy consuming society. It gives the history of machines and energy.

ECO-TIPS 5, 7: ENERGY CONSERVATION & ENERGY ALTERNATIVES

Concern, Inc., 2233 Wisconsin Avenue, NW

Washington, DC 20007

Price: Free

Level: 8-12

This is a series of pamphlets which deal with the central issues involved in meeting national energy demands. Particular emphasis is on environmental issues.

ELECTRIC POWER MAKES THE WORLD GO AROUND (1977)

C. L. Bete Company, Inc., 45 Federal Street,

Greenfield, MA 01301

Price: \$.50(quantity discount available) Level: 7-12

This booklet explains the ecology of electric power. It also shows the electrical industry's contributions to environmental protection.

Teacher Materials

ENERGY & ENVIRONMENT GLOSSARY

Energy & Man's Environment, 0224 S. W. Hamilton, Suite 301,
Portland, OR

Price: \$4.00

Level: K-12

This glossary is a presentation of terms which occur in EME instructional and reference material and in general literature. The information is adaptable to any classroom.

ENERGY & MAN'S ENVIRONMENT: GUIDE

Energy & Man's Environment, 0224 S. W. Hamilton, Suite 301,
Portland, OR 97201

Price: \$25.00

Level: K-12

This seven part guide is a multidisciplinary source of energy and conservation education ideas. Included are an introduction and six accompanying booklets which focus on key energy-environmental topic areas and which suggest classroom activities.

ENERGY & MATTER

Instructor Curriculum Materials, Dansville, NY 14437

Price: \$4.95

Level: 1-5

Energy and Matter contains six poster sets that feature experiences and observations. The back of each poster has activity suggestions.

THE ENERGY BOOK (1975)

Department of Education, Rutledge Office Building,
Columbia, NC 29201

Price: \$1.50

Level: K-12

This is a collection of energy-education activities that can be used individually or by groups. Appropriate subject use is indicated.

ENERGY CONSERVATION EXPERIMENTS YOU CAN DO (1974)

Author: R. F. Schultz

Thomas Alva Edison Foundation, 143 Cambridge Office Plaza,
Southfield, MI 48075

Price: \$.50(quantity discount available) Level: 5-10

This booklet shows youngsters how they can make a contribution to energy conservation. It offers simple experiments that can be done at little cost.

Teacher Materials

ENERGY CONSERVATION ISSUE

National Forest Products Association, Forest Industries Bldg.,
1619 Massachusetts Avenue, N.W., Washington, DC 20036

Price: \$.15

Level: 9-12

This booklet explains how wood plays a beneficial role in energy conservation, helps in reducing power consumption, and home operating costs. The benefits of insulated wood frame construction are also discussed.

ENERGY CRISIS: A TEACHER'S RESOURCE GUIDE

New Jersey Education Association, 180 West State Street,
Trenton, NJ 08608 (Note: Available only in New Jersey)

Price: Free

Level: 4-12

This guide contains objectives, background content, activities, and references for energy education. It is designed to be used in any classroom.

THIS ENERGY CRISIS: IS IT REAL?

Changing Times Educational Service, 1729 "H" Street, N.W.,
Washington, DC 20006

Price: \$12.00

Level: 9-12

This is an inquiry-oriented unit which evaluates current energy resources as compared to current and future needs. It contains spirit masters and transparencies.

ENERGY CRISIS: WHAT MAKES IT SO COMPLEX & COMPLICATED? (1973)

Author: S. David Freeman

Center for Information on America, Washington, CT 06793

Price: \$.35

Level: 10-12

This pamphlet discusses our energy problem. It examines solutions currently available.

ENERGY CRISIS: WHAT YOU CAN DO ABOUT IT

Amoco Teaching Aids, P. O. Box 1400-K, Dayton, OH 45414

Price: \$1.00

Level: 4-6

This unit focuses on energy demand, sources, conservation, and potential new sources. A teacher's guide and spirit masters are included.

Teacher Materials

ENERGY: KEY TO THE FUTURE (1974)

Dutchess County, Board of Cooperative Educational Services,
R. D. No. 1, Salt Point Turnpike, Poughkeepsie, NY 12601
Price: \$4.00 Level: K-12

This is a thirty-two page book of teaching techniques for the understanding and conservation of energy. Included are classroom projects, diagrams, and charts.

ENERGY PRIMER

Tennessee Valley Authority, Chattanooga, TN 37401
Price: Free Level: K-12

This teacher's supplement provides general information on energy sources, supply, and efficient uses. Emphasis is on the immediate TVA area.

ENERGY PUZZLES: CROSSWORD PUZZLES FOR SCIENCE (1975)

Author: W. H. Crouch
Hayes School Publishing Co., Inc., 321 Pennwood Avenue,
Willinsburg, PA 15221
Price: \$2.50 Level: 4-6

The eighteen duplicating masters included in this unit provide information on energy. Topics included are fossil fuels, electricity, nuclear and solar energy, and other energy sources.

EXPERIMENTS: PROPERTIES OF GAS & HEAT ENERGY

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$3.25 (free to teachers) Level: 8-12

This is a series of seventeen experiments on the properties of gas and fourteen experiments on heat. These are prepared on spirit duplicating masters for reproduction for student use.

FACTS ABOUT OIL

American Petroleum Institute, 2101 L Street, N.W.,
Washington, DC 20037

Price: Single copies free to teachers Level: 10-12

This booklet gives an historical overview of the oil industry, and projects future energy needs and sources. It includes specific learning objectives and activities, and is suitable for use in social studies, science, or history classes.

Teacher Materials

HISTORY CHART OF DOMESTIC WATER HEATING

Total Environmental Action, Inc., Church Hill,
Harrisville, NH 03450

Price: \$4.00

Level: 9-12

This chart gives a brief description of eighteen experimental solar domestic water heaters from around the world. Most are from the period 1959-1969.

HISTORY CHART OF SOLAR HEATED BUILDINGS

Total Environmental Action Inc., Church Hill,
Harrisville, NH 03450

Price: \$4.00

Level: 9-12

This chart shows essentials of seventeen historic solar projects, beginning in 1945 with a Colorado residence and going to a solar home built in 1963 in Washington, D.C. Information is given in eleven categories under collectors, storage, controls, and performance.

LIGHT AND SOUND

Hayes School Publishing Co., Inc. 321 Pennwood Avenue,
Wilkesburg, PA 15221

Price: \$2.50

Level: 6-9

This science unit for intermediate students presents basic concepts of light and sound. Also included are numerous experiments and activities.

LIVING WITH ENERGY (1976)

Amoco Teaching Aids, P.O. Box 1400-K, Dayton, OH 45414

Price: \$1.00

Level: 7-12

Living with Energy focuses on the types and amounts of energy available, where energy is used, how it can be conserved, and various energy sources. A teacher's guide and spirit masters are included.

LIVING WITHIN OUR MEANS: ENERGY AND SCARCITY

Author: B. W. Jamason

In New York, the material is available from the New York State
Education Dept. Albany, NY 12234

For out-of-state requesters, the material is available through ERIC.

Price: free through ERIC

Level: K-12

This is suitable background material for a unit in energy conservation. It includes suggestions for teaching and for special activities.

Teacher Materials

MAGNETS AND ELECTRICITY

Hayes School Publishing Co., Inc., 321 Pennwood Ave.,
Wilkesburg, PA 15221

Price: \$2.50

Level: 6-9

This science unit for intermediate students presents basic concepts of magnets and electricity. Also included are numerous experiments and activities.

MAGNETS AND ELECTRICITY

Instructor Curriculum Materials, Dansville, NY 14437

Price: \$4.95

Level: 1-5

Eight sets of posters involve students through a "hands-on" concept-process approach to learning. This unit also provides teacher notes, vocabulary, suggested lessons, evaluation, and activities.

PHYSICAL SCIENCE EXPERIMENTS

Author: E. V. Stokes

Instructor Publication, Inc., Curriculum Materials,
7 Bank St., Dansville, NY 14437

Price: \$2.45

Level: K-6

This is a teacher's handbook of elementary experiments in physical science. It includes illustrations and a list of things needed for the experiments.

PRACTICAL SUN POWER (1974)

Author: W. H. Rankins, III

Lorien House, P.O. Box 1112, Black Mountain, NC 28711

Price: \$4.00

Level: 7-12

This book offers five simple solar energy projects, including a spherical reflector, a solar oven, and a window air heater. It contains clear instructions for the projects.

PROGRAMMED LEARNING INSTRUCTION IN USING LEISURE TIME, ENERGY, AND MONEY (UNIT VII, 1970)

Delta Pi Epsilon National Office, Gustavus Adolphus College,
St. Peter, MN 56082

Price: \$1.00

Level: 7-12

This is a fifty-nine item programmed instruction booklet. It is designed to help students learn to effectively use time, energy, and money.

Teacher Materials

SCIENCE ON A SHOESTRING (1975)

Author: H. Strongin

Addison-Wesley Publishing Co., Sand Hill Rd., Menlo Park, CA 94025

Price: \$6.40

Level: K-7

This resource book contains high-quality, low-cost science activities. It outlines fifty experiences in three areas:

1) Scientific Method; 2) Change; 3) Energy, Fields, and Forces.

SCIENCE PRINCIPLES AND GAS APPLIANCES WITH EXPERIMENTS

Author: E. C. Weaver

American Gas Association, 1515 Wilson Boulevard, Arlington, VA 22209

Price: \$1.50 each (free to teachers)

Level: 7-9

This is a thirty-two page booklet on science principles used in six gas appliances: cooking range, home heater, water heater, clothes dryer, incinerator, and air conditioner. The booklet contains twelve experiments on ditto masters, a teacher's guide, and transparencies.

SIMPLE SCIENCE EXPERIMENTS

Author: Hall, M. Y.

Instructor Publ., Inc., Curriculum Materials, 7 Bank St.,
Dansville, NY 14437

Price: \$2.45

Level: K-6

This is a teacher's handbook of Elementary general science experiments. It includes illustrations and a list of things needed to perform the experiments.

SOCIAL AND PHYSICAL SCIENCES AIDS FOR EDUCATION PROGRAM (posters)

Indiana & Michigan Electric Co., 2101 Spy Run Avenue,
Ft. Wayne, IN 46801

Price: free

Level: 7-12

This is a series of six posters for use in physical and social science classes. It includes a teacher's guide to form a complete unit of study.

SOLAR ENERGY EXPERIMENTS

Author: Thomas W. Norton

Rodale Press, 33 E. Minor Street, Emmaus, PA 18049

Price: \$5.95 paperback

Level: 10-12

This book is a compilation of experiments designed to acquaint the student with solar energy measurement, collection, and use. Eighteen experiments and eight activities are directly applicable to current physics, general science, and environmental science curricula.

Teacher Materials

THINGS, IDEAS, WAYS OF DOING THINGS: PEOPLE & TECHNOLOGY

Education Development Ctr., 55 Chapel St., Newton, MA 02160

Price: \$1.15 each

Level: 6-9

This is a two-part activities booklet. In volume one, students are given directions to build a model of the Volta River and to dam the model. In volume two, they construct a generator and two hoists, and operate them using power from their dam.

USING THE ENVIRONMENT (Six Volumes)

Author: Collis, M.

MacDonald Raintree, Inc., 205 W. Highland Ave.,
Milwaukee, WI 53202

Price: \$31.95

Level: K-9

(Individual Volumes available: \$5.49)

Using the Environment is a teachers reference set for environmental field studies. Included are explorations, investigations, and decision-making activities.

WEATHER/ENERGY AND MATTER

Instructor Curriculum Materials, Dansville, NY 14437

Price: \$4.25

Level: 4-7

This book of duplicating masters contains self-directed activities in a field-notebook format. Each page features teaching concept, pupil activity, and an extension idea.

WHAT'S THE MATTER WITH ENERGY?— ENERGY SOURCES

Educational Research Council of America, Rockefeller Bldg.,
Cleveland, OH 44113

Price: Teacher guide \$2.05

Level: 10-12

Student guide \$1.84

This set of eleven activities explores the interactions of different energy sources. The students are able to explore the current state of the energy crisis.

I MEDIA

D. Activities

1. Devices

ELECTRICITY SERVES OUR COMMUNITY

Edison Electric Inst., Educational Services, 90 Park Ave.,
N.Y., NY 10016

Price: \$3.00

Level: 4-6

This is a bulletin board model of an electric power system. Also included are suggestions on teaching about electricity.

ELECTRONIC ENERGY-ENVIRONMENT SIMULATOR (Models A-230, A-240, A-209)

Tenntronics, Inc., P.O. Box F, Clarksville, TN 37040

Price: \$1995.00 to \$6100.00

Level: 2-12

(Contact supplier for price information)

The simulator presents facts and predictions concerning energy consumption and environmental decline in a dramatic, non-technical manner. It can be used in front of large or small groups and invites audience participation and discussion.

PORTABLE SOLAR COOKER

Edmund Scientific, 778 Edscorp Building, Barrington, NJ 08007

Price: \$14.95

Level: 3-12

This is a lightweight cooker using solar energy. It is complete with all necessary parts and recipes.

PORTABLE SOLAR WATER HEATER

Edmund Scientific, 7778 Edscorp Building, Barrington, NJ 08007

Price: \$10.95

Level: 3-12

This water heater uses solar energy to convert ten quarts of cold water to hot. It weighs only twelve oz. when empty.

SOLAR ENERGY CUBE

Edmund Scientific, 7778 Edscorp Building, Barrington, NJ 08007

Price: \$29.50

Level: 3-12

Silicon solar cells on a plastic cube convert solar energy into electric, then to kinetic energy. This unit produces 1.5V DC, 225 MA of current in running an electric motor.

Devices

SOLAR FURNACE PLANS

Edmund Scientific, 7778 Edscorp Building, Barrington, NJ 08007

Price: \$6.00

Level: 3-12

Included are instructions for building a solar furnace with easily available materials (Fresnel lens included with plans). The furnace develops temperatures of 2000F in the area of focus.

I. MEDIA

D. Activities

2. Games

ATTITUDE

Northwest Regional Educational Lab, 710 S.W. Second Ave.,
Portland, OR 97204

Price: \$3.25 teacher guide Level: 9-12
\$3.25 student guide

Written in BASIC (computer language), Attitude provides exercises on attitudes about U.S. gasoline consumption. It utilizes attitudes, opinion poll results and role playing to focus on methods of reducing gasoline consumption.

BALANCE: A SIMULATION OF FOUR FAMILIES CAUGHT IN ECOLOGICAL DILEMMAS

Interact, Box 262, Lakeside, CA 92040

Price: \$14.00 Level: 8-12

This is a simulated historical development of a particular geographical area which, through role-playing, introduces key ecological issues. Attitudes and skills (reading, writing, speaking, listening) are developed through interaction with these issues.

CONSUME

Northwest Regional Educational Lab, 710 S.W. Second Ave.,
Portland, OR 97204

Price: \$3.00 teacher guide Level: 9-12
\$3.95 student guide

Written in BASIC (computer language) Consume is a problem solving unit. It utilizes simulation to focus on basic issues of U.S. energy consumption.

DAM: COMPUTER IMPLEMENTED WATER RESOURCE TEACHING GAME

Robert T. Lackey, Ph.D., Department of Fisheries and
Wildlife Sciences, Virginia Polytechnic Institute and
State University, Blacksburg, VA 24061

Price: available at cost Level: 11-12
(write for information)

This is an interactive teaching game. It is designed to illustrate the decision-making issues in managing a large, multiple use reservoir used for generating electricity.

Games

EARTH

Northwest Regional Educational Lab, 710 S.W. Second Avenue,
Portland, OR 97204

Price: Teacher guide \$3.95

Level: 9-12

Student guide \$3.25

Written in BASIC (computer language) Earth provides a data base on twenty-four energy variables for eighty-three countries. Variables include production of energy, per capita income, and energy reserves.

ENERGY

Northwest Regional Educational Lab, 710 S.W. Second Avenue,
Portland, OR 97204

Price: Teacher guide \$3.25

Level: 9-12

Student guide \$3.25

Written in BASIC (computer language), Energy is a simulation of the U.S. Energy Crisis. It provides role playing, and tests various strategies and solutions to deal with the energy crisis.

THE ENERGY-ENVIRONMENT GAME

Edison Electric Inst., Educational S cs., 90 Park Avenue,
New York, NY 10016

Price: \$30.00 (with cassette)

Level: 7-12

This set comprises a multimedia instructional simulation students consider society's demand for energy, its potential impact on the environment, and possible trade-offs.

ENERGY FUTURES (Parr Pak, Project ECOLOGY)

Bill Guise, Director, Highline Public School, 15675 Ambaum Blvd. S.W.,
Seattle, WA 98166

Price: \$2.50

Level: 7-9

Energy Futures is an environmental learning experience for use at the intermediate science level. It covers a two to four week period.

ENERGY X

Ideal School Supply Co., 11000 S. Laverne Ave., Oak Lawn, IL 60453

Price: \$19.50

Level: 5-12

Energy X is a classroom simulation dealing with a finite energy source which includes role playing. All necessary materials to conduct the simulation are included.

Games

FUTURE

Northwest Regional Educational Lab, 710 S.W. Second Avenue,
Portland, OR 97204

Price: \$3.75 teacher guide
\$3.25 student guide

Level: 9-12

Future is a computerized simulation program written in BASIC (computer language). It simulates effects of energy-related decisions on energy supply and consumption.

HOUSEHOLD ENERGY GAME (1974)

Developed by: T. W. Smith, et al.
Sea Grant College Program, University of Wisconsin,
Madison, WI 53706

Price: \$.15 each

Level: 6-12

This game is designed to help computation and reduction of energy usage. Consumption is compared to national and world averages.

INVESTIGATING RESOURCE ACQUISITION AND USE

Author: Jack Sheridan
Harris County Department of Education, 6208 Irvington Blvd.,
Houston, TX 77022

Price: \$2.50

Level: 7-9

This is a strategy in which the student becomes an oil operator charged with the responsibility of finding petroleum for a hypothetical nation facing an acute energy shortage. Through such involvement, the student achieves insight into role functioning in the acquisition of resources.

PEOPLE AND TECHNOLOGY: UNIT II TOOL KIT

Education Dev. Ctr., 55 Chapel St., Newton, MA 02160

Price: \$65.00

Level: 6-9

In this game, students consider the impact of large scale irreversible intervention into the natural environment in the search for energy sources. The example studied is the damming of the Volta River in Ghana.

Games

POWER: URBAN ENVIRONMENTAL STUDIES ACTIVITIES FOR THE
INTERMEDIATE GRADES

Author: B. J. Smith et al.

Science Dept., Educational Service Center, 807 Northeast Broadway,
Minneapolis, MN 55413

Price: unknown at printing

Level: 4-6

This includes environmental studies activities exploring a broad range of powers in the urban setting - water power, personal power, power of nature, emotional power, etc. Students learn to investigate our sources of energy and consider various alternatives.

SYSTEMS: LET'S GET IT ALL TOGETHER

Educational Research Council of America, Rockefeller Bldg.,
Cleveland, OH 44113

Price: \$1.94 teacher guide

Level: 8-11

\$1.31 student guide

\$6.78 decisions game

Systems introduces the process of problem solving by studying the home as a system. The unit focuses on the home's subsystems (electrical, communication, cooking, etc.) and decision making skills.

I. MEDIA

D. Activities

3. Kits

ELECTRICAL SAFETY IN AND AROUND THE HOME

Edison Electric Institute, Educational Svcs.,
90 Park Ave., New York City, NY 10016
Price: \$25.00 Level: 4-6
This is a multimedia kit on electrical safety practices. A teachers guide, games, poster, and activity set are included with filmstrips and cassettes.

THE ENERGY CHALLENGE, from PRIORITY ONE: ENVIRONMENT

Pollution Control Ed. Center,
Township of Union Public Schools, 2369 Morris Ave.,
Union, NJ 07083
Price: \$59.00 Level: 7-12
This kit comes complete with filmstrips, transparencies, audio-cassette, activities and a teacher's guide. It covers all areas of the energy crisis from coping with shortages to conservation and new sources of energy.

ENERGY & MATTER

Author: S. Kress
Instructor Publ. Inc., Curriculum Materials,
7 Bank St., Dansville, NY 14437
Price: \$4.95 Level: 4-8
This kit contains a poster, enrichment material, student material, and a teacher's guide. Included are energy experiments and illustrations.

ENERGY: SOURCES & MAN'S NEEDS

Ward's Natural Science Establishment, Inc.,
P. O. Box 1712, Rochester, NY 14603
Price: \$29.00 Level: 7-12
This is a multimedia unit. It covers energy sources, consumption, problems of present supplies, and future sources and needs.

ENVIRONMENTAL EDUCATION CURRICULUM SVC.

Natural Science for Youth Foundation, 16 Holmes St.,
Mystic, CT
Price: \$20.00 per yr/10 issues Level: 4-6
This subscription brings a monthly packet with a poster, student material, field trip guide, curriculum guide, and teacher's guide. Subjects such as energy conservation, animals, and the natural sciences are included.

Kits

ENVIRONMENTAL EDUCATION FOR THE SECONDARY SCHOOL - CURRICULUM PROJECT (2 Sets)

Designed by: Mary Hepburn
University of Georgia, Dept. of Social Science Education
Athens, GA 30602

Price: \$5.00 per set

Level: 9-10

Set I - Growth: How Much is Too Much? This is a set of two modules (science and social studies) and teacher guides. It is written for average ninth grade students.

Set II- Water: How Good is Good Enough? This is a set of two modules (science and social studies) and teacher guides. It is written for slower tenth grade students.

FINDING OUT ABOUT SIMPLE MACHINES

Benefic Press, 10300 W. Roosevelt Rd., Westchester, IL 60153

Price: \$33.30

Level: K-6

This kit is designed to give primary students the opportunity to investigate basic science facts and concepts through a variety of media. It contains filmstrips (with experiments), five books, cassette narration, and a teacher's guide.

FUNDAMENTALS OF ELECTRICITY

Educational Teaching Aids, 159 W. Kinzie St.,
Chicago, IL 60610

Price: \$36.00

Level: 3-7

This kit provides electrical theory and practical knowledge of parallel and series circuits, proper electrical connections, and fuses. It contains eighteen experiments.

HOW YOUR GAS METER WORKS

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$.40 each (free to teachers)

Level: 6-9

This is a teaching kit illustrating how a gas meter works. It contains a chart, student material, ditto master, and teacher's guide.

MACHINES AND ENERGY: LAB II

Educational Teaching Aids, 159 W. Kinzie St., Chicago, IL 60610

Price: \$172.00

Level: 4-8

Machines and Energy is a set of five learning kits. There are ninety-eight experiments covering machines and the forms of energy they use.

MACHINES AT WORK

Media Materials, Inc., 2936 Remington Ave.,
Baltimore, MD 21211

Price: \$9.95

Level: 4-6

Machines do work and the work can be measured. With this kit, simple problems are solved to determine the advantages of using mechanical devices.

MAN, ENVIRONMENT: A CHANGING RELATIONSHIP?

Denoyer-Geppert Company, 5235 Ravenswood Ave.,
Chicago, IL 60640

Price: \$294.00

Level: 10-12

This system is designed to develop awareness of relationships between people and their physical and social environments. The system includes a chart, ditto, student material, a teacher's guide, spirit master, and a record.

NATURAL GAS: SCIENCE BEHIND YOUR BURNER

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: \$1.75 (free to teachers)

Level: 6-9

This teaching kit includes a filmstrip and collateral material depicting the flow of gas from the well to the burner. It also contains a map, chart, teacher's guide, and student material.

NATURAL SCIENCE SERIES

Encyclopedia Britannica Ed. Corp., 425 N. Michigan Ave.,
Chicago, IL 60611

Price: \$83.50

Level: 4-6

This program supplements science textbooks by offering "hands-on" laboratory experiences in the classroom. Simple experiments are performed by students according to instructions on audio-cassettes and aided by filmstrip visuals.

OUR ENERGY-BASED ECONOMY (1974)

Edison Electric Institute, Educational Services,
90 Park Ave., New York City, NY 10016

Price: \$30.00

Level: 6-8

(free from some local electric companies)

This multimedia kit, which explains the basic principles of economics, includes four filmstrips, four records, a teacher's guide, and activity sheets. The relationship of energy supply and the free market system are explored.

Kits

RESOURCE RECOVERY KIT (1974)

National Association of Secondary School Principals,
1904 Association Drive, Peston, VA 22091

Price: \$12.00

Level: 7-12

Resource Recovery Kit is an interdisciplinary kit for learning about reclaiming resources on a large scale, especially solid waste. It can be used in science, social studies, or industrial art classes, and includes charts, student manuals, teacher's guides, and a section on environmental careers.

WIDE WORLD OF ENERGY

Walt Disney Media Co., 500 S. Buena Vista St.,
Burbank, CA 91521

Price: \$119.00

Level: 4-9

This is multimedia kit. It contains a filmstrip, cassette, study prints, game, and activity cards.

I MEDIA

E. Reference Sources

A.G.A. TEACHING AIDS ABOUT GAS

American Gas Association, 1515 Wilson Boulevard,
Arlington, VA 22209

Price: free

Level: K-12

This is a listing of teaching aids available from the American Gas Association. It is updated each year.

A BIBLIOGRAPHY FOR ENERGY EFFICIENCY IN THE FOOD SYSTEM, REVISED EDITION

Energy, Food and You Program,
Washington State Office of Environmental Education
c/o Shoreline District Offices, NE 158th and 20th Ave. NE
Seattle, WA 98155

Price: \$1.00

Level: 7-12

This is a twelve page compilation and annotation of books and materials on energy as it relates to the food system. Items are listed by grade level and classroom use.

A BIBLIOGRAPHY OF ENERGY MATERIALS

Citizens Energy Project, 1413 K Street, NW, 8th Floor
Washington, DC 20005

Price: Unknown at time of
printing

Level: K-12

This is a bibliography of materials specifically related to energy concepts of energy usage. It is suitable for use as teacher background material or for projects.

CITIZEN'S ENERGY PROJECT

1413 K Street, NW, 8th Floor, Washington, DC 20005
Citizen's Energy Project provides information services to persons or groups interested in energy issues. Prices for materials range from \$.25 to \$20.00 (pamphlets, books, newsletter, studies, plans, etc.)

COMMUNITY ENVIRONMENTAL PROGRAM: ENVIRONMENT, ENERGY, EDUCATION

Beaverton Schools, District No. 48, P.O.Box 200,
Beaverton, OR 97005

Price: \$5.00 (program guide)

Level: 1-6

This is a funded, community based elementary program. The purpose is to increase energy-environment literacy. (For further information write to the above address)

Reference Sources

COMPOSITE OF ENERGY CURRICULUM GUIDES & ENRICHMENT MATERIAL

Mobile Co. Public Schools, P.O. Box 1327, Mobile AL 36601
(available only in Alabama)

Price: free

Level: K-12

This is a composite listing of energy curriculum guides and enrichment materials including name and address of source. It is structured to provide teachers a ready reference to supplementary materials available for utilization in their core instructional program.

CONSERVATION/ECOLOGY: RESOURCES FOR ENVIRONMENTAL EDUCATION (1975)

Author: David and Barbara Harrah
Scarecrow Press, Inc., 52 Liberty St., P.O. Box 656,
Metuchen, NJ 08840

Price: \$12.00

Level: K-12

This is designed to be a practical bibliographic reference to a wide range of conservation-sociological teaching materials and ideas. It contains books, periodicals, agencies, glossary of terms, and a chronology of environmental legislation.

EARS ENERGY CATALOGUE

Environmental Action Reprint Service, 2239 East Colfax,
Denver CO 80206

Price: free in single copies
(postage donations appreciated)

Level: K-12

The EARS Catalogue offers a large selection of books, pamphlets, plans, and graphic material. These focus on energy, conservation and the environment.

EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

ERIC/SMEAC, 1200 Chambers Rd., Columbus, OH 43212
ERIC offers easy access to reports of innovative programs, curriculum materials, conference proceedings, bibliographies, outstanding professional papers, and reports of significant efforts in educational research and development. The Columbus, Ohio clearing house specializes in science, mathematics and environmental education. It is suggested that the center be contacted for further information on this service.

Reference Sources

ENERGY-ENVIRONMENT SOURCEBOOK

Author: John Fowler
National Science Teachers Association,
1741 Connecticut Ave., NW, Washington, DC 20009
Price: \$4.00 Level: K-12
The Sourcebook was written for teachers in an informal style and includes quantitative information, tables, and illustrations. Technical appendices and a glossary extend its usefulness.

ENERGY FROM THE WIND: ANNOTATED BIBLIOGRAPHY

Engineering Research Center, Colorado State University,
Fort Collins, CO 80523
Price: \$15.00 Level: 11-12
This bibliography includes references to books, articles, conferences, and technical reports on wind generated electricity. The scope ranges from homebuilt projects to advanced technical studies and reports on large-scale production.

ENERGY IN THE U.S.: BIBLIOGRAPHY AND STUDY QUESTIONS (1973)

The Foundation for Economic Education, Inc.,
Irvington-on-Hudson, NY 10533
Price: \$.25 (handling charge) Level: 10-12
This material was originally prepared for use by debaters and coaches. It discusses the economics of production and use of energy and lists background references.

ENERGY REFERENCE SOURCES

Oregon State University Press, 101 Waldo Hall,
Corvallis, OR 97331
Price: \$2.00 Level: 10-12
This is a reference source for energy information. It is designed for use in research as well as for students and teachers.

ENERGY RELATED LITERATURE LIST

John Roky, 3703 Narsaw Drive, San Diego, CA 92115
Price: \$1.00 Level: K-12
This is a listing of out-of-print and current literature on all aspects of energy. It is a useful source of background material and information.

Reference Sources

ENVIRONMENTAL CONSERVATION EDUCATION: A SELECTED ANNOTATED BIBLIOGRAPHY

The Interstate, Printers & Publishers, Inc.,
19-27 North Jackson St., Danville, IL 61832
Price: \$2.50 paperbound Level: K-12
(educational discounts available)

*This is a bibliography of environmental education materials.
It is designed specifically for school use.*

FUEL ECONOMY ANNOTATED BIBLIOGRAPHY

Am. Auto Assn., 8111 Gatehouse Rd., Falls Church, VA 22042
Price: \$.11 Level: 10-12

*This is a listing of pamphlets, research, and literature.
The materials aid in teaching fuel conservation in driver
education classes.*

HENDERSHOT BIBLIOGRAPHY

4114 Ridgewood, Bay City, MI 48706
Price: (contact source) Level: K-12

*Hendershot Bibliography is a resource for locating programmed
instruction materials that may be published by many companies.
Programmed materials in energy education are available at
varying prices.*

INTRODUCTION TO ENVIRONMENTAL PROGRAMMING

U.S. Jaycees, Box 7, Tulsa, OK 74102
Price: \$.25 Level: K-12

*This is a report on various Jaycee environmental programs. It
includes a list of environmental improvement project areas, and
information on resources and films.*

LEAGUE OF WOMEN VOTERS EDUCATION FUND

Isabelle Weber, Coordinator Energy Dept., 1730 M Str. NW,
Washington, DC 20036

*The LWV offers booklets on various topics including the energy
crisis and conservation. Call local office for availability
and price.*

Reference Sources

NATIONAL TECHNICAL INFORMATION SERVICE (NTIS)

5285 Port Royal Rd., Springfield VA 22161

The NTIS of the U. S. Dept. of Commerce is the central source for the public sale of U.S. and foreign government sponsored research, development, and engineering reports prepared by governmental agencies, their contractors, grantees, or by special technology groups. NTIS information collection exceeds one million titles and all are for sale at agency cost. To receive information on the availability of energy-environmental issues material write to the above address.

NOTE: The Environmental Protection Agency Publications Bibliography (Quarterly Abstract Bulletin) is available through NTIS.

OIL FROM SHALE AND TAR SANDS

Author: E. M. Perrini

Noyes Data Corp., Mill Rd. at Grand Avenue,
Park Ridge, NJ 07656

Price: \$36.00

Level: 12

This is a survey of U.S. patent literature on shale oil recovery. It contains descriptive excerpts of 213 processes related to the retorting and refining of shale oil and the separation of oil from natural tar sands.

PUBLIC AFFAIRS, CHEVRON U.S.A

Chevron U.S.A., Inc., 555 Market St., San Francisco, CA 94105

Many booklets are available from Chevron on energy and conservation. These are free but only available in single copies.

ROCHESTER GAS & ELECTRIC CORPORATION

89 East Ave., Rochester, NY 14649

Rochester Gas and Electric offers many booklets on the power industry and conservation. Their materials are free of charge.

SAMPLER

Energy and Man's Environment, 0114 SW Hamilton, Suite 301,
Portland, OR 97201

Price: free

Level: L-12

The Sampler is a collection of energy and conservation education materials. It is teacher developed, multidisciplinary, and contains clear objectives and activities.

Reference Sources

SOLAR DIRECTORY

Environmental Action Reprint Service, 2239 East Colfax,
Denver, CO 80206

Price: \$20.00 plus \$1.50 postage Level: 12

The Solar Directory gives historical perspectives and background information on solar research and development. It covers the period 1974-75.

SOLAR ENERGY TECHNOLOGY: A STATE OF THE ART ANNOTATED BIBLIOGRAPHY

Ocean Engineering Information Service, P.O.Box 989,
La Jolla, CA 92037

Price: \$18.00 Level: 10-12

This bibliography is intended as an interdisciplinary guide to the state of solar energy technology. It is useful in studies of applications for solar energy.

SOURCEBOOK ON ATOMIC ENERGY (1967)

Author: S. Glasstone

Van Nostrand Reinhold, Div. of Litton Ed. Publ., Inc.,
450 W. 33rd St., New York City, NY 10001

Price: \$16.95 Level: 10-12

This is a sourcebook for atomic energy, past and present. Information on nuclear reactors, controlled fusion, and cosmic rays is included.

UNITED STATES DEPARTMENT OF ENERGY

Technical Information Center, P.O. Box 62,
Oak Ridge, TN 37830

The Technical Information Center (TIC) is the collection, processing, and distribution point for scientific and technical information generated by the Department of Energy. It provides extensive technical reference services and document and film request services, and carries out an educational services program devoted to aiding students and teachers at all levels in their studies of energy. For detailed information on specific services, write to the TIC at the above address. For a listing of films available on free loan, ask for the Energy Films Catalog; for a listing of free booklets and curriculum materials, ask for the Selected Department of Energy Publications.

Reference Sources

UNITED STATES GOVERNMENT PRINTING OFFICE

Superintendent of Documents, Washington, DC 20402
The U.S.G.P.O. offers an extensive range of energy related publications and information. This includes material on energy legislation and committees, research, alternative energy sources, conservation strategies, forecasts, and bibliographies. The price for this material varies from less than \$1.00 to \$10.00. By writing to the above address, one can obtain free of charge, copies of the Subject Bibliography Index and Price List 36 which contain all necessary information for selecting material pertinent to energy-environmental issues. Notification Key: N554.

VOLUNTEERS IN TECHNICAL ASSISTANCE (VITA)

3706 Rhode Island Ave., Mt. Rainier, MD 20822
Price: prices range from \$1.00 to \$6.00
VITA publishes technical bulletins on do-it-yourself technology covering a wide variety of subjects, including water power, solar power, and wind power. The bulletins are technically accurate, clearly illustrated, and written in plain language.

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II. GRADE LEVEL

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